

Bid Security

Vendor

CITY OF NEWARK

Delaware

CONTRACT NO. 13-13

CURTIS PAPER MILL REMEDIATION AND PARK CONSTRUCTION

NOTICE

Return intact with properly
completed forms or bid may be rejected.

CITY OF NEWARK

Delaware

CONTRACT NO. 13-13

CURTIS PAPER MILL REMEDIATION AND PARK CONSTRUCTION

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CITY OF NEWARK

Delaware

CONTRACT NO. 13-13

CURTIS PAPER MILL REMEDIATION AND PARK CONSTRUCTION

NOTICE OF LETTING

Sealed bids for Contract No. 13-13, Curtis Paper Mill Remediation And Park Construction, will be received in the Purchasing Office, Newark Municipal Building, 220 South Main Street, Newark, Delaware 19711 until 2:00 p.m., prevailing time, Tuesday, November 12, 2013 and will be publicly opened and read aloud in the Council Chamber shortly thereafter.

ENGINEER:

Pennoni Associates Inc.
Christiana Executive Campus
121 Continental Drive, Suite 207
Newark, DE 19713-4310
Phone Number: (302) 655-4451

OWNER:

City of Newark
220 South Main Street
Newark, DE 19711
Phone Number: (302) 366-7020

All inquiries concerning this bid, bid documents, specifications, etc., shall only be coordinated through the City of Newark. Inquiries shall be received one week prior to the bid opening date.

Plans and Specifications may be obtained from the City's web page www.cityofnewarkde.us. Information can be found by using the following links: Business, Bid/Proposal Opportunities.

There will be a Mandatory Pre-Bid meeting held on October 17, 2013 at 1:30 p.m. at the Newark Municipal Building Council Chamber (first floor) with a site visit to follow.

CITY OF NEWARK

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CONTRACT NO. 13-13

CURTIS PAPER MILL REMEDIATION AND PARK CONSTRUCTION

GENERAL PROVISIONS

1. BIDS

Each bid shall be submitted on the proposal form included herein. The proposal and all other required documents must be submitted in a sealed envelope clearly identified with the bidder's name and marked "City of Newark - Contract No. 13-13, Curtis Paper Mill Remediation and Park Construction". Bid Documents must be received in the Purchasing Office prior to 2:00 p.m. prevailing time, Tuesday, November 17, 2013. Each bid so submitted shall constitute an irrevocable offer for a period of sixty (60) calendar days following the bid opening date.

2. BID SECURITY

Each bid must be accompanied by a certified check, or cashier's check, or bid bond in the amount of 5 percent (5%) of the proposed bid price, payable to the City of Newark. Failure to provide the required bid security may be grounds for rejection of the bid.

If the successful bidder fails or refuses to execute and deliver the contract within fourteen (14) calendar days after receiving notice of the award of the contract, the successful bidder shall forfeit to the City for such failure or refusal the security deposited with the bid. Any certified check or cashier's check submitted as security shall be returned to all unsuccessful bidders sixty (60) calendar days after the bid opening date. The successful bidder shall provide the City with a Contract Surety Bond in the full amount of the contract guaranteeing faithful performance of the contract. Such bond shall be provided to the City with the executed contract within fourteen (14) calendar days after receiving notice of award of the contract. Upon receipt of the contract surety bond, the City will return any certified check or cashier's check submitted as bid security by the successful bidder.

3. TAXES

The price(s) quoted shall not include federal or state taxes. If applicable, the successful bidder shall provide the City with three (3) copies of the required tax exemption forms to accompany the bidder's invoice.

4. AWARDS

The City Manager will review each of the bids submitted and make a recommendation to the City Council on the disposition of the bids. The City Council reserves the right to accept or reject any or all bids or parts of bids as they may determine and to waive any irregularities or defects where the best interest of the City would be served.

5. BID PRICE

The bid price shall include all transportation, delivery, installation and all charges for the goods and services specified for the Curtis Paper Mill Remediation And Park Construction. The work done under this contract will be partially funded by the State of Delaware, the State of Delaware prevailing wage schedule (Attachment 1) will therefore be applicable to this contract.

6. TIME OF COMPLETION AND LIQUIDATED DAMAGES

Contractor is to complete the work within one hundred and eighty (180) calendar days from the date of notification of award. Liquidated damages of one hundred fifty dollars (\$150.00) per day may be assessed to the Contractor by the City for each day the contract is extended beyond the completion date. Liquidated damages are not to be construed as a penalty in any sense.

7. INTENT OF SPECIFICATIONS

It shall be the contractor's responsibility to furnish the goods and services specifically indicated in the scope of work and specifications and such other as may be required to meet the intent of the specifications, drawings, or as may be necessary to provide the operation intended by the City.

8. EXCEPTIONS/DESCRIPTIVE INFORMATION

Any and all exceptions which are taken to the drawings and specifications must be noted in the space provided on the

proposal. Any exception to the specifications may be grounds for rejection of the bid.

9. EQUALS

Where a specific product is specified by catalog or model number, the acceptability of any other "or equal" product shall be subject to the sole judgment of the City of Newark.

10. WARRANTIES AND STANDARDS

All goods are to be new and unused in all component parts, including all accessories. The specifications will be construed as the minimum required. When the manufacturer's standard exceeds the specifications, the standard units will be furnished. All materials shall be free of defects. All standard manufacturer's warranties and guarantees shall apply to equipment and goods supplied under this contract.

The Contractor guarantees all of the work and materials for a period of one year after the date of completion and final acceptance by the City.

11. WORKMANSHIP

Workmanship will conform to the best current manufacturing practice followed for goods of this type. Component parts and units will be manufactured to definite standard dimensions with proper fit and clearances.

12. FINAL INSPECTION

All delivered goods and services will be subject to inspection by the City of Newark, Delaware. If in any way an item fails to meet the terms of the contract, it may be rejected or liquidated damage charges made. The decision of the City will be final and any rejected items or materials will have to be replaced at the expense of the vendor.

13. ADVERTISEMENTS

Any bidder submitting a bid will not use the name of the City in any advertisement without first obtaining the written consent of the City Manager.

14. EEO AND BUSINESS LICENSES

The bidder shall possess all required business or other licenses and also shall be a fair and equal opportunity employer.

15. NONCOLLUSION

The bidder shall not, either directly or indirectly, enter into any agreement, participate in any collusion, or otherwise take any action in restraint of free competitive bidding in connection with the contract.

16. ADDENDA AND QUESTIONS

Any changes to the contract documents shall be made by written addenda which may be issued with extensions to the bid submittal date if necessary to allow adequate time for response. Bidders shall bear the entire responsibility for being sure they have received all such addenda. Any questions regarding the bidding process should be directed to Ms. Cenise Wright, Purchasing Administrator, at (302) 366-7022. Any questions regarding the drawings and technical specifications should be directed to Mr. Roy A. Simonson, PE, Director of Public Works and Water Resources, at (302) 366-7055.

17. PAYMENT

No invoice will be processed for payment until the goods and/or services have been delivered and verification is made that the specifications under this contract have been met. Progress payments, when requested, will be evaluated and approved for payment based on work completed to date according to the approved schedule of values. Payment for material stored on site will be made at 50% of the material's invoice price. Full payment will be made after the material is installed. Payment will be made within thirty (30) days of final acceptance by the City.

18. LIABILITY INSURANCE AND INDEMNIFICATION

- A. Except as otherwise provided by law, the contractor shall at all times maintain and keep in force such insurance as will protect him from claims under Worker's Compensation Acts, and also such insurance as will protect him and the owner from any such claims for damages for personal injuries, including death, which may arise from operations under this contract, whether such operations be by the

contractor or by any subcontractor or anyone directly or indirectly employed by any of them.

- B. The Prime Contractor shall be required to provide Commercial General Liability (CGL) coverage with limits of insurance not less than:

\$2,000,000 Each Occurrence Limit
\$2,000,000 Personal & Advertising Injury Limit
\$3,000,000 Annual Aggregate Limit
\$3,000,000 Products-Completed Operations Limit
\$1,000,000 Business Auto Liability Limit
\$5,000,000 Commercial Umbrella Limit

The Prime/General Contractor, The City of Newark (Owner) and all other parties required of the general Contractor shall be included as insured on the CGL, using Additional Insured Endorsements providing coverage as broad as the coverage provided for the named insured subcontractor.

Subcontractors approved in association with the hiring of a Prime Contractor shall be required to provide Commercial General Liability (CGL) coverage with limits of insurance not less than:

\$1,000,000 Each Occurrence Limit
\$1,000,000 Personal & Advertising Injury Limit
\$2,000,000 Annual Aggregate Limit
\$2,000,000 Products-Completed Operations Limit
\$1,000,000 Business Auto Liability Limit
\$3,000,000 Commercial Umbrella Limit

All Contractors shall provide Contractors Pollution Liability with limits not less than:

Each Claim or Occurrence	\$3,000,000
Annual Aggregate	\$3,000,000

The Contractors Pollution Liability policy shall include coverage for Emergency Response Costs, Contingent Transportation, Non-Owned Disposal Sites, and Natural Resource Damage. If coverage is written on a claims-made basis, an Extended Reporting Period, or tail coverage, shall be provided for two (2) years following completion of the insured's services. In the alternative, the Contractors Pollution Liability policy shall be renewed for not less than two years following completion. The

policy retroactive date shall be no later than the effective date of this Agreement.

- C. A copy of the Certificate of Insurance must accompany each bid.

19. ITEMS TO BE EXECUTED AND SUBMITTED WITH BID

Bidders are notified that the proposal and the bid security must be executed and completed in full and submitted with the bid at the time of bidding, or may be subject to rejection.

20. ITEMS TO BE SUBMITTED WITH SIGNED CONTRACT

- A. Schedule of Values
- B. Construction Schedule
- C. Construction Bond
- D. Insurance Documentation

21. RETAINAGE

The City will retain 5% of the progress payments until such time as the project is complete and accepted by the City.

22. TERMINATION OF AGREEMENT

This agreement may be terminated by the City upon thirty (30) days written notice if the contractor fails to perform satisfactorily in accordance with the terms and conditions of the contract. In the event this agreement is terminated, the contractor shall be paid for services satisfactorily rendered up to the termination date.

- 23. There will be a pre-bid meeting held on Thursday, October 17, 2013 at 1:30 p.m. at the Newark Municipal Building Council Chamber (first floor) with a site visit to follow.

CITY OF NEWARK

Delaware

CONTRACT NO. 13-13

CURTIS PAPER MILL REMEDIATION AND PARK CONSTRUCTION

SCOPE OF WORK

1. SCOPE OF WORK

The Curtis Paper Mill Remediation And Park Construction project consists of the brownfield remediation of the site, construction of improvements to convert the site to a City park land and site entrance improvements. The project includes, but is not necessarily limited to, the following major work items, which are described in greater detail in the attached Project Drawings:

1. Removal of existing storage tanks, appurtenances and concrete pad.
2. Excavation, consolidation, and capping of approximately 4,300 cubic yards of chromium, lead, arsenic, vanadium and PAH contaminated soils at the property located at 225 Paper Mill Road, Newark, New Castle County, Delaware. The goal of the project is to consolidate all areas of impacted soil in conjunction with capping to reduce the overall footprint of impacted soils to be left on-site. The area of soil consolidation is part of four regions. Region#1 will be capped with two (2) feet of imported clean fill. Region #2 will consist of removing two feet of soil (approximately 800 cubic yards) and relocating the soil beneath a designated capping area. The excavation will be placed with two (2) feet of imported clean fill. Region#3 will consist of removing two (2) feet of soil (approximately 3,500 cubic yards) and relocating the soil beneath a capped area. The excavation will be placed with two (2) feet of imported clean fill. Region #4 will be capped with two (2) feet of imported clean fill and an asphalt cap.
3. Asphalt and concrete areas within proposed capped areas will be punctured to allow for surface drainage to infiltrate into the subsurface soils.

4. Installation of a geotextile demarcation barrier placed between the clean fill and contaminated soils.
5. The consolidated areas will be covered with two (2) feet of imported clean fill material, graded, topped with 6-inches of seeded topsoil. Placement of soil cap on relocated soil areas outside of proposed pavement areas, using clean imported fill or certified clean excess cut materials from on-site.
6. The imported clean fill will be randomly tested in order to comply with the Delaware Department of Natural Resources and Environmental Control (DNREC) Uniform Risk-Based Remediation Standards (URS).
7. The Project Environmental Consultant will conduct sampling for each work area completed by the Bidder using discrete soil sampling. Upon receipt of acceptable analytical results from the work area sampling, the Project Environmental Consultant will issue a Certificate of Completion for satisfactory work conducted by the Bidder.
8. Make connections to the City of Newark water service and/or site hydrants as necessary to provide adequate water for dust suppression. Written notification and permission from the City of Newark shall be obtained prior to any connections without additional cost to the City.
9. Expose existing mill race, remove debris from raceway and stockpile for containment or dispose of legally, install geotextile liner and backfill raceway. Document/record race makeup (material/appurtenances), exact location (metes and bounds) and provide documents of race to owner.
10. Construction of swale between proposed path and Paper Mill Road using imported clean fill or clean excess material taken from excavation areas suitable for re-use. All conveyance areas and slopes 3:1 or steeper require seeding and matting at a minimum.
11. Construction of curb, gutter, pavement, sidewalks, trails, plaza and plaza amenities.
12. Entrance improvements including the widening of Paper Mill Road to provide turn lanes and bike lanes (varying from 0'-5') on the West side of Paper Mill Road, removal of

existing concrete median on Paper Mill Road to provide a 75' wide left turn lane on northbound Paper Mill Road with full depth pavement, mill and overlay on Paper Mill Road at approximately 540' South and 185' North of the intersection with Old Paper Mill Road to provide updated pavement markings through the site. Mill and overlay will also occur on Old Paper Mill Road approximately 100' East of the intersection with Paper Mill Road.

13. As noted above, the attached Project Drawings further define the scope of work. The Contractor shall furnish all the required labor, materials, equipment and appurtenances necessary for the completion of the work.
14. Contractor shall remove and dispose of an above ground storage tank (AST). The AST is located adjacent to the northerly section of Region #1.

2. LOCATION

The site is located on the western side of Paper Mill Road at the intersection with Old Paper Mill Road, approximately 1,700' North of the intersection of Paper Mill Road and Cleveland Avenue in the City of Newark, Delaware.

3. PERMITS, CERTIFICATIONS, LAWS AND ORDINANCES

The Contractor shall perform the work in accordance with all local, state and federal laws and ordinances. The Contractor is required to have or obtain a City Contractor's License prior to starting the work. The Contractor is required to obtain any permits required for completion of the work, including but not limited to a building permit. The fees for City of Newark permits, if applicable, will be waived.

4. SUBMITTALS

The Contractor shall submit a minimum of three (3) copies of each submittal for review and approval. The Contractor shall provide the following submittals to the Owner for review and approval:

- A. Shop drawings for all proposed materials and equipment to be used in the work.
- B. Sequence of construction (if different than indicated on the Drawings).

- C. Documents/Records of mill race to Owner
- D. Excavation Method: Submit method(s) to be implemented to excavate two (2) feet of metals and PAH contaminated soils within four (4) regions and consisting of .81 acres (total of approx. 4,300 cubic yards as outlined in Drawing #C8001, Remediation Site Plan). Also submit an accompanying method(s) to be utilized to stage, load, transport, and consolidate the volume of excavated contaminated soils.
- E. Puncturing of concrete and asphalt areas: Submit method of puncturing concrete and asphalt areas for allowing infiltration of surface water into the subsurface soils.
- F. Submit details of demarcation barrier (geo-textile).
- G. Dust Suppression Method: Submit method(s) to be implemented to control dust generated during excavation activities from migrating off-site to the extent required by this specification.
- H. Site Health & Safety Plan: Submit a Site Specific Health and Safety Plan which shall, at a minimum, outline worker personal protection from metals and PAH soil contamination and provide "detailed" medical emergency procedures. Such plan shall be in compliance with applicable OSHA requirements and standards and shall be in full force for the duration of the earthwork scope of work.
- I. Equipment Decontamination: Submit a site-specific equipment decontamination plan outlining the method(s) to be employed to decontaminate all equipment and/or vehicles prior to any such equipment and/or vehicles leaving the worksite each day the work is in progress. Such decontamination plan shall include a wash-down station with wash run-off controls and mud control procedures to prevent the spread of contamination onto access roads, highways or onto neighboring properties.

5. SECURITY AND SITE ACCESS

The work area is on a public road. The Contractor is responsible to establish a laydown area and for the security of the equipment and materials related to the work. The Contractor must provide sanitary facilities on site for the duration of

the project.

It shall be the responsibility of the contractor to obtain permission from any neighboring property owner if said contractor finds it necessary to enter upon or use in any manner the property of any neighbor for the expedition of the contractor's work.

6. SITE CONSTRUCTION AND EXISTING UTILITIES

- A. The Contractor is responsible to account for and consider existing site conditions and existing utilities. Prior to starting any work, the Contractor shall contact Miss Utility of Delmarva at 1-800-282-8555 for a utility mark out. The Contractor is responsible for locating and protecting existing utilities for the duration of the work.
- B. The failure to show on the contract drawings any existing utilities shall not relieve the contractor of his responsibility in determining the locations of utilities.
- C. Any damage done to existing utility lines, services, poles, and structures shall be repaired or replaced by the contractor at his own expense. The contractor shall notify all possible owners of utilities in the areas where work is to be done of the schedule and extent of such work.

7. EXAMINATION OF SITE, DRAWINGS, ETC.

- A. Before submitting proposals, bidders shall inform themselves fully of the nature of the work by a personal examination of the site, the drawings and specifications, and by such other means as they may prefer to consider necessary, as to matters, conditions and considerations bearing on or in any way affecting the preparation of their proposals and the contract. They shall not, at any time after submission of the proposal, dispute the accuracy of such drawing or the specifications and the general conditions of such drawings or the specifications and the general conditions nor assert that there is any misunderstanding in regard to the location, extent or nature of the work to be performed.
- B. The general Contractor and each subcontractor will be required to furnish all labor and material of his own kind shown, indicated or implied reasonably by all drawings and/or the specifications, unless specifically noted

otherwise. For his interest, each subcontractor should examine all drawings carefully and all parts of the specifications as well as those which refer primarily to his own branch or branches of the work.

8. STARTING DATE AND SEQUENCE OF CONSTRUCTION

The starting date of this contract will be as specified by the City in a written "Notice to Proceed." A preconstruction meeting shall be scheduled to finalize the sequence of construction. The final decision as to sequence of construction shall be that of the Engineer.

9. SUPERVISION OF WORK AND COORDINATION

The contractor shall supervise the work and shall secure full cooperation of all subcontractors, if any, to complete the work with a minimum of interference with the operating personnel of the City.

10. COORDINATION WITH THE CITY

The contractor shall coordinate all activities with the City including but not limited to traffic control, requests for system shut downs, and inspections. The contractor shall provide the City with reasonable time to respond to requests for information and for coordination.

11. INSPECTION OF MATERIAL AND WORK

A. Workmanship shall be of good quality and all work and material shall be at all times subject to the inspection of the City of Newark or their duly authorized representatives. The contractor shall provide reasonable and necessary facilities for such inspection. If required by the City, the contractor shall take down or uncover portions of the finished work.

B. The contractor agrees that in the event that any of the material or work, or both, shall be rejected as defective or unsuitable by the City, the material shall be replaced and the work shall be done again immediately to the satisfaction and approval of the City at the cost and expense of the contractor.

C. Any omission or failure on the part of the City of Newark or its inspectors to disapprove or reject any defective work or

materials shall not be construed to be acceptance of any defective work or material.

- D. Prior to commencement of any work, the Bidder shall inspect areas in which work will be performed. The Bidder shall be responsible to prepare a listing of damage to structure, surfaces, equipment or of surrounding properties which could be misconstrued as damage resulting from the work. Photographs or videotapes shall be taken of existing conditions as necessary to document conditions. Submit this information to the Environmental Consultant prior to starting any work.

12. WORKING HOURS

- A. The normal working hours per day on the contract will be 7:00 a.m. to 5:00 p.m., unless otherwise authorized in advance by the City in writing, and it is not contemplated that the Contractor will work on Saturdays, Sundays or holidays.
- B. Costs Associated: In the event that the Contractor works on Saturday, Sunday, or holidays, the Contractor shall be required to pay for inspection or engineering services performed during these times. Payments for these additional services shall be made by a reduction in the monthly estimate paid the Contractor for the period covered by the current estimate.

13. PROTECTION TO PUBLIC AND PROPERTY

- A. The Contractor shall ensure protective measures to the general public and to occupants of property along and adjacent to the work.
- B. The Contractor shall be strictly responsible for any and all damage or injury of every kind and description which directly or indirectly may be done to any property or sustained by any persons during the execution of the work.
- C. When or where any direct or indirect damage or injury is done to public or private property by or on account of any act, omission, neglect or misconduct in the execution of the work, the Contractor shall restore, at his own expense, such property to a condition similar or equal to that existing before such damage or injury was done by repairing, rebuilding or otherwise restoring as may be

directed, or he shall make good such damage or injury in an acceptable manner.

- D. The Contractor shall provide protection to prevent damage of existing trees during clearing and construction activities and shall prevent vehicles and materials from driving over or being placed on the root system within the drip line. The Contractor shall consult with the City of Newark Parks and Recreation Department for this task.

14. SAFETY PRECAUTIONS

- A. The contractor shall execute work under this contract with the utmost concern for the safety of the general public. All areas worked upon and subject to travel by the public shall be identified with the proper warning indicators and signs during the working period. Upon completion of the contract or when such areas are reopened to public travel, they shall be rendered in a safe condition using either temporary or permanent repair material as the case may be. No private driveway shall be blocked or closed without the property owner being notified prior to construction.
- B. Streets, roads and driveways used by the contractor for access to and from the work site shall be protected from damage in excess of that caused by the normal traffic of vehicles used for or in connection with construction work. Any such damage done shall be repaired immediately and left in good condition at the end of the construction period and shall be repaired at the contractor's expense.
- C. The disturbance or dislocation of soil and/or other residual materials containing soil contamination may cause respirable contaminants to be released into atmosphere, thereby creating a potential health hazard. Apprise all workers, supervisory personnel, subbidders, and consultants who will be at the job site of the seriousness of the identified potential hazards and of proper work procedures, which must be followed.
- D. Where in the performance of the work, workers, supervisory personnel, subbidders, or consultants may encounter, disturb, or otherwise function in the immediate vicinity of any identified soil contamination and/or other residual materials, notify all personnel of such hazards prior to entry into the site. All personnel shall take appropriate and continuous measures, as necessary, to protect these

persons from the potential hazard of exposure. Such measures shall include the procedures and methods described herein, and compliance with regulations of applicable federal, state, and local city agencies.

15. RIGHT-OF-WAY

All operations shall be confined to the assigned work area. The City will provide no right-of-way over other properties. The contractor shall take every precaution to minimize the inconvenience to the owners or tenants of adjacent property. Public roads shall not be obstructed in such a way as to cut off traffic. The contractor shall, at his own expense, repair any damage or injury to either public or private property during the progress of the work.

16. TRAFFIC CONTROL AND ROAD SIGNS

The contractor shall be responsible for traffic control for the duration of the project and shall coordinate traffic control plans and obtain necessary permits from DELDOT for work on Paper Mill Road and Old Paper Mill Road. The contractor shall be responsible for removal and re-installation of all signs in the work area. Signs necessary for the safe movement of traffic shall be maintained in operation during construction. Any other signs shall be properly stored by the contractor, who shall be responsible for them.

17. EXCAVATED MATERIAL

It shall be the responsibility of the Contractor to dispose of all excavated material which, in the opinion of the Engineer, is unsatisfactory for backfill or fill. The cost of this disposal shall be borne by the Contractor.

The Contractor shall be responsible for providing the appropriate equipment and personnel necessary to excavate, stage, and load contaminated material for off-site disposal, as identified from previous site environmental investigations or identified during construction activities. The work will be performed in accordance with the procedures described in the special provision for Item 69 - Contaminated Material.

18. DUST CONTROL/EROSION AND SEDIMENT CONTROL

It shall be the responsibility of the contractor to handle dust control on this project and necessary erosion and sediment

controls required by the City and State, including but not limited to stormwater inlet protection.

19. WATER SUPPLY

The contractor shall not use City fire hydrants without permission and advance notice. The contractor shall schedule and perform work in a manner that minimizes disruption of water service to City of Newark customers.

20. JOB SITE MAINTENANCE, RESTORATION AND CLEANUP

The contractor is responsible to restore all disturbed areas to original or better condition and remove all debris, residuals, trash, and excess materials from the site. The contractor is required to keep the work area clean during construction and remove trash as it accumulates. Roads shall be kept clean and free of mud, debris and dirt. The contractor is responsible for the cost of street sweeping and maintenance required for upkeep of clean road surfaces.

CITY OF NEWARK
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CURTIS PAPER MILL REMEDIATION AND PARK CONSTRUCTION

SPECIAL CONDITIONS

SCOPE

The scope of the work involves the excavation, consolidation, and capping of contaminated soils, the construction of a passive park and site entrance improvements. Key features of the facility included drainage structures, site amenities, and landscaping.

ACCOMPANYING DRAWINGS AND SPECIFICATIONS

- A. The City of Newark Public Works Department Standard Specifications for Road and Utility Construction dated January 2001, the Delaware Department of Transportation Standard Specifications for Road and Bridge Construction dated August 2001, and the Delaware Department of Natural Resources and Environmental Control (DNREC) Delaware Erosion and Sediment Control Handbook, dated December 2003, including all revisions up to the date of advertisement.
- B. In case of any conflict with the General Provisions or any section of the Standard Specifications these Special Provisions shall govern. It should be noted that the Standard Specifications are written in their standard form and portions of them may be inapplicable to the work covered under this contract. The applicability or inapplicability of the Standard Specifications shall be determined solely by the City and the Engineer.
- C. The drawings accompanying these specifications were prepared by Pennoni Associates Inc.
- D. The City of Newark Standard Specifications are available on the City of Newark website at www.cityofnewark.de.us.

INTENT OF PLANS AND SPECIFICATIONS

- A. The plans which accompany the specifications, if any, are herein designated contract plans and are for the purpose of illustrating the general character and extent of the work and are subject to such modifications as may be found

necessary or advisable, either before or during the execution of the work, and the Contractor shall conform to and abide by whatever supplementary plans and explanations which may be furnished by the City of Newark or the Engineer for the purpose of illustrating the work in more detail.

- B. All work that may be called for in the specifications and not shown on the plans, or shown on the plans and not called for in the specifications shall be executed and furnished by the Contractor as if described in both ways. Should any incidental work or material be required which is not denoted in the specifications or plans, either directly or indirectly, but which is nevertheless necessary for the proper carrying out of the intent thereof, the Contractor is to understand the same to be implied as required and shall perform all such work and furnish all such material as fully as if they were particularly or described.

WORKING FORCE

- A. The Contractor shall at all times, enforce strict discipline and good order among his employees, and will not employ on the job any unfit person or anyone not skilled in the work assigned to him.
- B. The Contractor shall employ only such foremen, superintendents and workmen as are careful and competent, and the City of Newark may demand the dismissal of any person employed by the Contractor who shall be guilty of misconduct or who neglects or refuses to comply with the directions given, and such person shall not again be employed at the site of this contract without express written consent of the City. Failure of the Contractor to comply with these provisions shall be sufficient reason for the City of Newark to withhold all estimated payments which are or may become due, or its representatives may suspend the work until compliance with such orders is affected.

SALVAGEABLE MATERIAL

All salvageable items and material designated by the Engineer, in addition to the excavated material covered under Item 2, Excavation and Embankment, shall be removed to City property, if directed by the Engineer.

RESTORATION OF DISTURBED SURFACES

Upon completion of the work, all related work pertaining to lawns, shrubbery, driveways, and slopes which have been disturbed shall be restored to their original condition, including topsoiling and seeding at the Contractor's expense. Topsoil and seeding shall conform to Item 29 and 31 in the Public Works Department Standard Specifications.

LOCATION OF UTILITIES

- A. It will be the responsibility of the Contractor to call "Miss Utility", 1-800-282-8555, before any excavation work begins for the marking of the location of existing utilities.
- B. Any damage done to existing utility lines, services, poles and structures shall be repaired or replaced by the Contractor at his own expense. The Contractor shall notify all possible owners of utilities in the area where work is to be done of the schedule and extent of such work.

SANITARY PROVISIONS

The Contractor shall provide and maintain in a neat and sanitary condition such sanitary conveniences and accommodations for the use of his employees as may be necessary to comply with the requirements and regulations of the Department of Health or of other bodies or tribunals having jurisdiction thereof. He shall commit no public nuisance.

SUPERVISION OF THE ENGINEER

The work is to be carried out under the supervision of the Engineer and to his entire satisfaction. The work and materials shall be strictly of the best quality of the kinds specified herein, and should any work or materials other than those specified or shown be introduced into the construction of the work, the Engineer, or his authorized agent, shall have full power to reject them and they shall be removed from the premises within three (3) days by the Contractor after being notified to do so.

AUTHORITY OF THE ENGINEER

The Engineer shall in all cases, determine the amount, quality

and acceptability of the work and materials which are to be paid for under this contract; shall decide all questions in relation to said work and performance thereof; and shall, in all cases, decide questions which may arise relative to the fulfillment of the contract or to the obligations of the Contractor or to the obligations of the Contractor thereunder.

CLEANING UP

- A. The Contractor shall at his own expense, keep the sites of his operations clean during construction and remove all rubbish as it accumulates.
- B. Upon failure of the Contractor to keep the site of his operations clean to the satisfaction of the Engineer, the City may upon twenty-four (24) hours notice to the Contractor, remove any rubbish, materials, earth, etc., which the Engineer may deem necessary, charging the cost thereof to the Contractor and may deduct the amount from any monies that may be due him.

MAINTENANCE OF TRAFFIC

All work shall be performed in a matter that will ensure the least practical obstruction to traffic consistent with safety and shall comply with Sections 4.28 and 4.91 of the City of Newark Standards for Roadway and Utility Construction dated January 2001 and the latest edition of the Delaware Department of Transportation Manual on Uniform Traffic Control Devices (MUTCD) including all revisions as of the date of advertisement of this Contract.

CONTRACT SPECIAL PROVISIONS SUMMARY

Item 2B	Inlet Sediment Control, Drainage Inlet
Item 2C	Temporary Seeding
Item 2D	Stabilized Construction Entrance
Item 2E	Undercut Excavation
Item 2F	Silt Fence
Item 2G	Super Silt Fence
Item 2H	Compost Filter Log
Item 2I	Stabilization Matting
Item 2J	Check Dam
Item 2K	Tree Protection
Item 2L	Culvert Inlet Protection
Item 5A	Graded Aggregate Base Coarse, Type B

Item 5B	Borrow, Type A
Item 5C	Del No. 3 Stone
Item 16A	Face Brick
Item 21B	Corrugated Polyethylene Pipe
Item 21C	Flared End Sections
Item 25C	Portland Cement Concrete Curb, Type 1-8
Item 25D	Portland Cement Concrete Curb, Type 1-6
Item 26B	Curb Ramp, Type 2, 3 and/or 4
Item 26C	Sidewalk Surface Detectable Warning System
Item 26D	Curb Ramp, Type 1
Item 27A	Drainage Inlet, 34"x24"
Item 27B	Drainage Inlet, 48"x30"
Item 27C	Adjusting and Repairing Existing Drainage Inlet
Item 27D	Adjust and Repair Existing Sanitary Manhole
Item 27E	Cleaning Drainage Pipe, 15"-24" Dia.
Item 31A	Lawn Seeding
Item 31B	Wetland Seeding
Item 31C	Meadow Seeding
Item 37B	Riprap, R-4
Item 39A	WMA, Superpave, Type C, 160 Gyration, PG 76-22 Carbonate Stone)
Item 39B	WMA, Superpave, Type B, 160 Gyration, PG 76-22
Item 39C	WMA, Superpave, Bituminous Concrete Base Course, 160 Gyration, PG 64-22
Item 39D	Saw Cutting
Item 39E	WMA, Type C, 115 Gyration, PG 64-22
Item 39F	WMA, Type B, 115 Gyration, PG 64-22
Item 49A	Permanent Pavement Striping, Epoxy Resin Paint, White/Yellow, 5"
Item 49B	Permanent Pavement Striping, Symbol/Legend, Alkyd-Thermoplastic
Item 49C	Preformed Retroreflective Thermoplastic Pavement Markings, Bike Symbol
Item 50A	Installation or Removal of Traffic Sign(s) on Single Sign Post
Item 50B	Installation or Removal of Traffic Signs on Multiple Sign Posts
Item 51A	Adjust or Repair Existing Conduit Junction Well
Item 51B	Conduit Junction Well, Type 11
Item 51C	Conduit Junction Well, Type 14
Item 51D	Furnish & Install Up To 4" Schedule 80 PVC Conduit (Trench)
Item 51E	Furnish & Install Loop Wire 1-Conductor #14 Awg encased in ¼" Flexible Tubing in a Loop Sawcut
Item 51F	Pole Base Type 3
Item 51G	Pole Base Type 4
Item 51H	Traffic Control Device Equipment Turn on, Pick

	up, Removal & Maintenance, Type I
Item 51I	Traffic Control Device Equipment Turn on, Pick
	up, Removal & Maintenance, Type II
Item 51J	Bonding & Grounding Existing Junction Well
Item 52	Removal of Existing Portland Cement Concrete
	Pavement, Curb, Sidewalk, etc.
Item 53A	Warning Sign, Permanent
Item 53B	Temporary Warning Signs and Plaques
Item 53C	Plastic Drums
Item 53D	Arrow Panels, Type B
Item 53E	Flagger, New Castle County, State
Item 53F	Flagger, New Castle County, Overtime
Item 53G	Temporary Barricade, Type III
Item 54	Pipe Video Inspection
Item 55	Field Office - Type II
Item 56	Project Control System Development Plan
Item 57	CPM Schedule Updates and/or Revised Updates
Item 58	Maintenance of Traffic
Item 59	Construction Engineering
Item 60	Site Furnishings
Item 61A	Unit Pavers
Item 61B	Pre-Cast Concrete Pavers
Item 62	Air Monitoring - Respirable Particulates
Item 63	Structure Excavation, Backfill and Compaction
Item 64	Metals and PAH Contaminated Earthwork
Item 65	Planting

CONTRACT SPECIAL PROVISIONS

ITEM 2B - INLET SEDIMENT CONTROL, DRAINAGE INLET

In accordance with The Delaware Department of Transportation's Standard Specification Section 252 - Inlet Sediment Control.

ITEM 2C - TEMPORARY SEEDING

In accordance with The Delaware Department of Transportation's Standard Specification Section 734 - Seeding.

ITEM 2D - STABILIZED CONSTRUCTION ENTRANCE

In accordance with The Delaware Department of Transportation's Standard Specification Section 268 - Stabilized Construction Entrance and The Delaware Erosion and Sediment Control Handbook Section 3.4.7 - Stabilized Construction Entrance.

ITEM 2E - UNDERCUT EXCAVATION

In accordance with The Delaware Department of Transportation's Standard Specification Section 212 - Undercut Excavation.

ITEM 2F - SILT FENCE

In accordance with The Delaware Erosion and Sediment Control Handbook Section 3.1.2.1 - Standard.

ITEM 2G - SUPER SILT FENCE

In accordance with The Delaware Erosion and Sediment Control Handbook Section 3.1.2.3 - Super.

ITEM 2H - COMPOST FILTER LOG

In accordance with The Delaware Erosion and Sediment Control Handbook Section 3.1.7.

ITEM 2I - STABILIZATION MATTING

See Sediment and Stormwater plans and details for products; install in accordance with The Delaware Erosion and Sediment Control Handbook Section 3.4.6 - Stabilization matting and product specifications.

ITEM 2J - CHECK DAM

In accordance with The Delaware Erosion and Sediment Control Handbook Section 3.3.3 - Check Dam.

ITEM 2K - TREE PROTECTION

In accordance with The Delaware Erosion and Sediment Control Handbook Section 3.7.2 - Protection of Trees in Urbanizing Areas.

ITEM 2L - CULVERT INLET PROTECTION

In accordance with The Delaware Erosion and Sediment Control Handbook Section 3.1.6-1 - Culvert Inlet Protection.

ITEM 5A - GRADED AGGREGATE BASE COARSE, TYPE B

In accordance with The Delaware Department of Transportation's Standard Specification Section 302 - Graded Aggregate Base Coarse.

ITEM 5B - BORROW, TYPE A

In accordance with The Delaware Department of Transportation's Standard Specification Section 209 - Borrow.

ITEM 5C - DEL NO. 3 STONE

In accordance with The Delaware Department of Transportation's Standard Item 302011 - Del No. 3 Stone and Specification Section 302 - Graded Aggregate Base Course.

ITEM 16A - FACE BRICK

Face Brick: Facing brick complying with ASTM C 216

1. Products: Subject to compliance with requirements, provide the following:
 - a. Owner shall provide existing recycled brick to be used in pier construction. In the event that additional brick is needed, the brick to be used shall match the existing brick color, texture, and size.
2. Initial Rate of Absorption: Less than 30 g/30 sq. in. per minute when tested per ASTM C 67.
3. Efflorescence: Provide brick that has been tested according to ASTM C 67 and is rated "not effloresced."
4. Surface Coating: Brick with colors or textures produced by application of coatings shall withstand 50 cycles of freezing and thawing per ASTM C 67 with no observable difference in the applied finish when viewed from 10 feet.
5. Size (Actual Dimensions): 3-5/8 inches wide by 2-1/4 inches high by 7-5/8 inches long.
6. Application: Use where brick is exposed unless otherwise indicated.

ITEM 21B - HDPE, TYPE S, 18" DIAMETER

In accordance with The Delaware Department of Transportation's Standard Specification Section 612523 - Corrugated Polyethylene Pipe, Type S, 18" and City of Newark's Standard Specifications for Road & Utility Construction Section 21B - Corrugated Polyethylene Pipe.

ITEM 21C - HDPE FLARED END SECTIONS, 18" DIAMETER

In accordance with The Delaware Department of Transportation's Standard Specification Section 617 - Flared End Section and City of Newark's Standard Specifications for Road & Utility Construction Section 21C - Flared End Sections.

ITEM 25C - PCC CURB, TYPE 1-8

In accordance with The Delaware Department of Transportation's Standard Specification Section 701 - Curb and Integral Curb and Gutter.

ITEM 25D - PCC CURB, TYPE 1-6

In accordance with The Delaware Department of Transportation's Standard Specification Section 701 - Curb and Integral Curb and Gutter.

ITEM 26B - CURB RAMP, TYPE 2, 3 AND/OR 4

In accordance with The Delaware Department of Transportation's Standard Item 705009 - Curb Ramp, Type 2, 3, and/or 4 and Specification Section 705 - Portland Cement Concrete Sidewalk.

ITEM 26C - SIDEWALK SURFACE DETECTABLE WARNING SYSTEM

In accordance with The Delaware Department of Transportation's Standard Item 705007 - Sidewalk Surface Detectable Warning System and Specification Section 705 - Portland Cement Concrete Sidewalk.

ITEM 26D - CURB RAMP, TYPE 1

In accordance with The Delaware Department of Transportation's Standard Item 705008 - Curb Ramp, Type 1 and Specification Section 705 - Portland Cement Concrete Sidewalk.

ITEM 27A - DRAINAGE INLET, 34"x24"

In accordance with The Delaware Department of Transportation's Standard Specification Section 708 - Drainage Inlets and Manholes.

ITEM 27B - DRAINAGE INLET, 48"x30"

In accordance with The Delaware Department of Transportation's Standard Specification Section 708 - Drainage Inlets and Manholes.

ITEM 27C - ADJUSTING AND REPAIRING EXISTING DRAINAGE INLET

In accordance with The Delaware Department of Transportation's Standard Specification Section 710 - Adjusting and Repairing Drainage Inlets and Manholes.

ITEM 27D - ADJUST AND REPAIR EXISTING SEWER MANHOLE

In accordance with The Delaware Department of Transportation's Standard Specification Section 710 - Adjusting and Repairing Drainage Inlets and Manholes.

ITEM 27E - CLEANING DRAINAGE PIPE, 15" -24" DIA.

In accordance with The Delaware Department of Transportation's Standard Item 612535 - Cleaning Drainage Pipe, 15"-24" Dia. and Specification Section 612 - Reinforced Concrete Pipe.

ITEM 31A - LAWN SEEDING

Seed Mixture: See Landscape Plan and Details for mixtures specifications and rates; apply in accordance with Delaware Department of Natural Resources and Environmental Control Green Technology: Standards, Specifications, and Details for BMP's and the with The Delaware Erosion and Sediment Control Handbook .

ITEM 31B - WETLAND SEEDING

Seed Mixture: See Landscape Plan and Details for mixtures specifications and rates; apply in accordance with plans and manufacture's recommendations.

ITEM 31C - MEADOW SEEDING

Seed Mixture: See Landscape Plan and Details for mixtures specifications and rates; apply in accordance with plans and manufacture's recommendations.

ITEM 37B - RIPRAP, R-4

This work shall consist of furnishing and placing stone riprap. This work shall also consist of preparing the bedding area for the placement of riprap. The materials and construction shall be in accordance with The Delaware Department of Transportation's Standard Specification Section 712 - Riprap, and in reasonably close conformity

with the lines, grades, dimensions and locations shown on the plans or established by the Engineer. The quantity of stone riprap shall be paid for at the contract unit price per cubic yard.

ITEM 39A - WMA, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 76-22 (CARBONATE STONE)

In accordance with The Delaware Department of Transportation's Standard Item 401807 - WMA, Superpave, Type C, 160 Gyrations, PG 76-22 and Specification Section 401 - Hot-Mix, Hot-Laid Bituminous Concrete.

ITEM 39B - WMA, SUPERPAVE, TYPE B, 160 GYRATIONS, PG 76-22

In accordance with The Delaware Department of Transportation's Standard Item 401816 - WMA, Superpave, Type B, 160 Gyrations, PG 76-22 and Specification Section 401 - Hot-Mix, Hot-Laid Bituminous Concrete.

ITEM 39C - WMA, SUPERPAVE, BITUMINOUS CONCRETE BASE COURSE, 160 GYRATIONS, PG 64-22

In accordance with The Delaware Department of Transportation's Standard Item 401819 - WMA, Superpave, Bituminous Concrete Base Course, 160 Gyrations, PG 64-22 and Specification Section 401 - Hot-Mix, Hot-Laid Bituminous Concrete.

ITEM 39D - SAW CUTTING

This work consists of saw cutting existing bituminous and/or concrete pavement to accommodate the installation of full depth reconstruction areas, portland cement concrete sidewalk, and portland cement concrete curb ramps. All materials and construction methods shall conform to the requirements of The Delaware Department of Transportation's Standard Specification Section 762 - Saw Cutting Portland Cement and Hot-Mix, Hot-Laid Bituminous Concrete.

ITEM 39E - WMA, TYPE C, 115 GYRATIONS, PG 64-22

In accordance with The Delaware Department of Transportation's Standard Item 401816 - WMA, Superpave, Type C, 115 Gyrations, PG 64-22 and Specification Section 401 - Hot-Mix, Hot-Laid Bituminous Concrete.

ITEM 39F - WMA, TYPE B, 115 GYRATIONS, PG 64-22

In accordance with The Delaware Department of Transportation's Standard Item 401816 - WMA, Superpave, Type B, 115 Gyrations, PG 64-22 and Specification Section 401 - Hot-Mix, Hot-Laid Bituminous Concrete.

ITEM 49A - PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, WHITE/YELLOW, 5"

This work consists of supplying and installing pavement markings in

accordance with The Delaware Department of Transportation's Standard Specification Section 748 - Pavement Markings.

ITEM 49B - PERMANENT PAVEMENT STRIPING, SYMBOL/LEGEND ALKYD-THERMOPLASTIC

This work consists of supplying and installing pavement markings in accordance with The Delaware Department of Transportation's Standard Specification Section 748 - Pavement Markings.

ITEM 49C - PREFORMED RETROREFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS, BIKE SYMBOL

This work consists of supplying and installing pavement markings in accordance with The Delaware Department of Transportation's Standard Specification Section 748 - Pavement Markings.

ITEM 50A - INSTALLATION OR REMOVAL OF TRAFFIC SIGN(S) ON SINGLE SIGN POST

In accordance with The Delaware Department of Transportation's Standard Item 749687 - Installation or Removal of Traffic Sign(s) on Single Sign Post and Specification Section 749 - Reinforced Concrete Sign Foundations.

ITEM 50B - INSTALLATION OR REMOVAL OF TRAFFIC SIGNS ON MULTIPLE SIGN POSTS

In accordance with The Delaware Department of Transportation's Standard Item 749690 - Installation or Removal of Traffic Signs on Multiple Sign Posts and Specification Section 749 - Reinforced Concrete Sign Foundations.

ITEM 51A - ADJUST OR REPAIR EXISTING CONDUIT JUNCTION WELL

In accordance with The Delaware Department of Transportation's Standard Item 744544 - Adjust or Repair Existing Conduit Junction Well and Specification Section 744 - Conduit Junction Wells.

ITEM 51B - CONDUIT JUNCTION WELL, TYPE 11

In accordance with The Delaware Department of Transportation's Standard Item 744530 - Conduit Junction Well, Type 11, Precast Concrete/Polymer Lid-Frame and Specification Section 744 - Conduit Junction Wells.

ITEM 51C - CONDUIT JUNCTION WELL, TYPE 14

In accordance with The Delaware Department of Transportation's Standard Item 744531 - Conduit Junction Well, Type 14 and Specification Section 744 - Conduit Junction Wells.

ITEM 51D - FURNISH & INSTALL UP TO 4" SCHEDULE 80 PVC CONDUIT (TRENCH)

In accordance with The Delaware Department of Transportation's Standard Item 745604 - Furnish and Install up to 4" Schedule 80 PVC Conduit (trench) and Specification Section 745 - Conduits (Non-Metallic or Galvanized).

ITEM 51E - FURNISH & INSTALL LOOP WIRE 1-CONDUCTOR #14 AWGENCASED IN 1/4" FLEXIBLE TUBING IN A LOOP SAWCUT

In accordance with The Delaware Department of Transportation's Standard Item 746924 - Furnish & Install Loop Wire 1-Conductor #14 Awgencased in 1/4" Flexible Tubing in a Loop Sawcut and Specification Section 746 - Pole Bases.

ITEM 51F - POLE BASE TYPE 3

In accordance with The Delaware Department of Transportation's Standard Item 746847 - Pole Base Type 3 and Specification Section 746 - Pole Bases.

ITEM 51G - POLE BASE TYPE 4

In accordance with The Delaware Department of Transportation's Standard Item 746850 - Pole Base Type 4 and Specification Section 746 - Pole Bases.

ITEM 51H - TRAFFIC CONTROL DEVICE EQUIPMENT TURN ON, PICK UP, REMOVAL & MAINTENANCE, TYPE I

In accordance with the Delaware Department of Transportation's Standard Item 746939 - Traffic Control Device Equipment Turn on, Pick up, Removal & Maintenance, Type I Section 746 - Pole Bases.

ITEM 51I - TRAFFIC CONTROL DEVICE EQUIPMENT TURN ON, PICK UP, REMOVAL & MAINTENANCE, TYPE II

In accordance with the Delaware Department of Transportation's Standard Item 746940 - Traffic Control Device Equipment Turn on, Pick up, Removal & Maintenance, Type II Section 746 - Pole Bases.

ITEM 51J - BONDING AND GROUNDING EXISTING JUNCTION WELL

In accordance with the Delaware Department of Transportation's Standard Item 744545 - Bonding and Grounding Existing Junction Well and Specification Section 744 - Conduit Junction Wells.

ITEM 52 - REMOVAL OF EXISTING PORTLAND CEMENT CONCRETE PAVEMENT, CURB, SIDEWALK, ETC.

In accordance with The Delaware Department of Transportation's

Standard Specification Section 758 - Removal of Existing Portland Cement Concrete Pavement, Curb, and Sidewalk.

ITEM 53A - WARNING SIGN, PERMANENT

In accordance with The Delaware Department of Transportation's Standard Item 743544 - Warning Sign, Permanent and Specification Section 743 - Temporary Traffic Control and Devices.

ITEM 53B - TEMPORARY WARNING SIGNS AND PLAQUES

In accordance with The Delaware Department of Transportation's Standard Item 743024 - Temporary Warning Signs and Plaques and Specification Section 743 - Temporary Traffic Control and Devices.

ITEM 53C - PLASTIC DRUMS

In accordance with The Delaware Department of Transportation's Standard Item 743006 - Plastic Drums and Specification Section 743 - Temporary Traffic Control and Devices.

ITEM 53D - ARROW PANELS, TYPE B

In accordance with The Delaware Department of Transportation's Standard Item 743002 - Arrow Panels, Type B and Specification Section 743 - Temporary Traffic Control and Devices.

ITEM 53E - FLAGGER, NEW CASTLE COUNTY, STATE

In accordance with The Delaware Department of Transportation's Standard Item 743050 - Flagger, New Castle County, State and Specification Section 743 - Temporary Traffic Control and Devices.

ITEM 53F - FLAGGER, NEW CASTLE COUNTY, STATE, OVERTIME

In accordance with The Delaware Department of Transportation's Standard Item 743062 - Flagger, New Castle County, State, Overtime and Specification Section 743 - Temporary Traffic Control and Devices.

ITEM 53G - TEMPORARY BARRICADE, TYPE III

In accordance with The Delaware Department of Transportation's Standard Item 743023 - Temporary Barricade, Type III and Specification Section 743 - Temporary Traffic Control and Devices.

ITEM 54 - PIPE VIDEO INSPECTION

Description:

This work consists of the video inspection of the storm drain systems, and/or sanitary sewer systems (all pipe sizes included) in accordance

with these Specifications, and the details and locations shown on the Plans and by the Engineer.

Construction Methods:

The entire system(s) involved shall be numbered and then inspected by means of a closed-circuit television. The inspection will be done one section at a time in the presence of the City's inspector. This work shall not be performed until just prior to the placement of the final pavement surface in case repairs need to be done. But, shall be done no sooner than thirty days from the date of pipe placement.

The television camera used for the inspection shall be specifically designed and constructed for such inspection, capable of producing color video. Lighting for the camera shall be suitable to allow a clear picture of the entire periphery of the pipe. The camera shall be operative in 100% humidity conditions. The camera shall be equipped with Pan and Tilt, capable of scanning 360° to view the entire joint. The camera, television monitor, and other components of the video system shall be capable of producing quality to the satisfaction of the City. If unsatisfactory, the equipment shall be removed and replaced.

The condition of the entire pipe run shall be documented by moving the camera through the pipe in either direction. At each joint the camera shall stop and pan the entire circumference of the joint. Between joints, the camera shall move at a nominal speed of 10 to 15 feet per minute never exceeding 30 feet per minute. Manual winches, power winches, television cable and power rewinds or other devices shall not obstruct the camera view or interfere with proper documentation of the pipe condition.

The technician operating the camera shall be experienced and qualified in conducting video pipe inspections. The technician shall have the capability of controlling the movement of the television camera, adjusting the brightness of the built-in lighting system and focusing the television camera by remote control. The importance of accurate distance measurements is emphasized. A distance meter and location indicator shall appear on the monitor and video indicating the exact location of the camera in the pipe between (2) structures.

The view scanned by the television camera shall be transmitted to a color monitor of not less than 12 in., measured diagonally across the screen. The monitor shall be located such that the City inspector has full visual access.

Documentation:

Television Inspection Logs: Typed reports shall be submitted to the City for each location clearly showing the relation to the video meter at each problem point observed during inspection. In addition, other points of significance such as locations of catch basins, junction

boxes, manholes, open joints, areas of settlement, misaligned pipe, unplugged lift holes, unusual conditions such as a change of pipe size or type within a run, roots, laterals, storm sewer connections, broken or spalled pipe, presence of scale or corrosion and other discernible features shall be recorded and a copy of such records shall be supplied to the City.

For the purposes of documentation of a storm drain system, the following criteria shall be used to determine if a joint shall be considered an open joint:

ALL PIPE TYPES	MAXIMUM JOINT OPENING ALLOWED
12-36" ROUND	0.75"
42" & LARGER	1.25"
ALL ELLIPTICAL	1.50"

DVD Recordings: The Contractor shall supply a visual and audio record of the drainage and/or sanitary system that may be replayed. A minimum of one video shall be submitted for each location but separate locations shall not be combined on the same DVD. Video recording playback shall be at the same speed that it was recorded. Good quality labeled DVDs in a hard plastic case shall be submitted and become the property of the City.

The separate typed report shall list the Delaware State Plane NA D 83 Coordinates for each structure within the drainage system including catch basins, manholes and all inlet and outlet ends of pipes. This record shall be listed by structure number and record each structure's Northing and Easting coordinates along with street address. This report is to be forwarded to the City's NPDES after review by the construction staff.

Method of Measurement:

The quantity of pipe video inspection will be measured by the linear feet as indicated on the video monitor and verified by the Engineer.

Basis of Payment:

The quantity of pipe video inspection will be paid for at the Contract unit price per linear foot. Price and payment will constitute full compensation for furnishing all materials and equipment, obtaining coordinate and elevations, typed reports, DVD recordings, safety equipment, and for all labor, tools and incidentals necessary to complete the work.

ITEM 55 -FIELD OFFICE - TYPE II

In accordance with The Delaware Department of Transportation's Standard Specification Section 759 - Field Office - Type II.

ITEM 56 - PROJECT CONTROL SYSTEM DEVELOPMENT PLAN

In accordance with The Delaware Department of Transportation's Standard Item 763508 - Project Control System Development Plan and Specification Section 763 - Initial Expense.

ITEM 57 - CPM SCHEDULE UPDATES AND/OR REVISED UPDATES

In accordance with The Delaware Department of Transportation's Standard Item 763509 - CPM Schedule Updates and/or Revised Updates and Specification Section 763 - Initial Expense.

ITEM 58 - MAINTENANCE OF TRAFFIC

In accordance with The Delaware Department of Transportation's Standard Specification Section 743 - Temporary Traffic Control and Devices.

ITEM 59 - CONSTRUCTION ENGINEERING

In accordance with The Delaware Department of Transportation's Standard Item 763501 - Construction Engineering and Specification Section 763 - Initial Expense.

ITEM 60 - SITE FURNISHINGS

PART 1 - PRODUCTS

1.1 SUMMARY

A. Section Includes:

1. Seating.
2. Tables.
3. Bicycle racks.
4. Trash receptacles.
5. Information Signage.

B. Related Requirements:

1. Section 31 23 16 "Site Excavation" for excavation for installing concrete footings.
2. Section 32 13 13 "Concrete Pavements" for installing concrete pads.

1.2 ACTION SUBMITTALS

- ##### A. Product Data: For each type of product.

- B. Samples: For each exposed product and for each color and texture specified.
- C. Samples for Initial Selection: For units with factory-applied finishes.
- D. Samples for Verification: For each type of exposed finish, not less than 6-inch- (152-mm-) long linear components and 4-inch- (102-mm-) square sheet components.
- E. Product Schedule: For site furnishings. Use same designations indicated on Drawings.

1.3 INFORMATIONAL SUBMITTALS

- A. Material Certificates: For site furnishings.

1.4 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For site furnishings to include in maintenance manuals.

1.5 MAINTENANCE MATERIAL SUBMITTALS

- A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

- 1. As supplied by the manufacturer.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Products: Subject to compliance with requirements, provide the following in quantities indicated on the Drawings as manufactured by:

- 1. Benches

- a. Manufacturer:
Picnic Table Outlet

- b. Bench without back, 72" length, backless expanded metal, in ground mount in concrete, Model# PT-MD64D

- c. Color: Brown

d. Locations: As indicated on Drawings.

2. Picnic Tables

a. Manufacturer:
Picnic Table Outlet

b. Round Expanded Metal Table, 46" diameter, single post,
in ground mount in concrete. Model# PT-AIZBV.

c. Round Metal Table, 46" diameter, ADA single post
expanded metal, in ground mount in concrete. Model#
PT-WUNBB.

d. Color: Brown

e. Locations: As indicated on Drawings.

3. Trash Receptacles

a. By owner

4. Bicycle Racks

a. Manufacturer:
Vintage Metalwork, Inc.
19435 Elks Lodge Road
Milford, DE 19963
Phone: (302) 424.2270
info@vinmet.com

b. Hitching Mount, embedded mount, Model# BP02-IGC.

c. Color: Black

d. Locations: As indicated on Drawings

5. Information Signage

a. Manufacturer:
Pannier
345 Oak Road
Gibsonia, PA 15044
Phone: (724) 265.4900
www.PannierGraphics.com

b. Sign shall be fiberglass embedded sign and low profile
frame with double pedestal direct burial mounting as
shown on plans. The City of Newark will provide the
final graphic design for each sign prior to

fabrication/ordering. The sign manufacturer shall submit one proof for each sign map to the Engineer for approval. Construct per shop drawings and details, information signs to be similar to that constructed for the Pomeroy and Newark Rail Trail.

- c. Color: Per plans, shop drawings, and details
- d. Location: As indicated on the drawings.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas and conditions, with Installer present, for compliance with requirements for correct and level finished grade, mounting surfaces, installation tolerances, and other conditions affecting performance of the Work.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION, GENERAL

- A. Comply with manufacturer's written installation instructions unless more stringent requirements are indicated. Complete field assembly of site furnishings where required.
- B. Unless otherwise indicated, install site furnishings after landscaping and paving have been completed.
- C. Install site furnishings level, plumb, true, and securely anchored at locations indicated on Drawings. Retain "Post Setting" or "Posts Set into Voids in Concrete" Paragraph below if site furnishings are supported by embedded pipe or tubing posts, or revise to suit Project.

ITEM 61A - UNIT PAVERS

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes the following:
 - 1. Concrete pavers set in aggregate setting bed.
 - 2. Flagstone
 - 3. Edge restraints for unit pavers.

B. Related Sections include the following:

1. Division 31 Section "Earthwork" for compacted subgrade and subbase course, if any, under unit pavers.

1.2 SUBMITTALS

A. Product Data: For the following:

1. Concrete pavers.
2. Flagstone
3. Edge restraints.

B. Samples for Initial Selection: Manufacturer's color charts consisting of units or sections of units showing the full range of colors, textures, and patterns available for each type of unit paver indicated.

1. Include similar Samples of material for joints and accessories involving color selection.

C. Samples for Verification: Full-size units of each type of unit paver indicated; in sets for each color, texture, and pattern specified, showing the full range of variations expected in these characteristics.

1. Provide Samples with joints grouted and cured, showing the full range of colors to be expected in the completed Work.
2. Include Samples of exposed edge restraints.

D. Qualification Data: For firms and persons specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, names and addresses of architects and owners, and other information specified.

1.3 QUALITY ASSURANCE

A. Installer Qualifications: An experienced installer who has completed unit paver installations similar in material, design, and extent to that indicated for this Project and whose work has resulted in construction with a record of successful in-service performance.

B. Source Limitations: Obtain each type of unit paver, joint material, and setting material from one source with resources to provide materials and products of consistent quality in appearance and physical properties.

C. Mockups: Before installing unit pavers, build mockups for each form and pattern of unit pavers required to verify selections made under sample Submittals and to demonstrate aesthetic

effects and qualities of materials and execution. Build mockups to comply with the following requirements, using materials indicated for the completed Work, including same base construction, special features for expansion joints, and contiguous work as indicated:

1. Build mockups in the location and of the size indicated or, if not indicated, as directed by Architect.
2. Notify Architect seven days in advance of dates and times when mockups will be constructed.
3. Demonstrate the proposed range of aesthetic effects and workmanship.
4. Obtain Architect's approval of mockups before starting unit paver installation.
5. Maintain mockups during construction in an undisturbed condition as a standard for judging the completed Work.
6. Demolish and remove mockups when directed.
7. Approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Protect unit pavers and aggregate during storage and construction against soiling or contamination from earth and other materials.
 1. Cover pavers with plastic or use other packaging materials that will prevent rust marks from steel strapping.
- B. Store cementitious materials on elevated platforms, under cover, and in a dry location. Do not use cementitious materials that have become damp.

1.5 PROJECT CONDITIONS

- A. Cold-Weather Protection: Do not use frozen materials or materials mixed or coated with ice or frost. Do not build on frozen subgrade or setting beds. Remove and replace unit paver work damaged by frost or freezing.

1.6 UNIT PRICE

- A. Contractor to provide a unit price for paver installation based on detail shown in Construction Documents. Price shall include pavers, setting bed, concrete subbase, and edge restraint.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be

incorporated into the Work include, but are not limited to, the following:

- B. Manufacturers: Subject to compliance with requirements, provide products by one of the following, or approved equal, as approved by the Owner/Architect:

- 1. Concrete Pavers:
 - a. Hanover Architectural Products, Inc.
- 2. Steel Edge Restraints:
 - a. Border Concepts, Inc.
 - b. Ryerson: J. T. Ryerson & Son, Inc.

2.2 COLORS AND TEXTURES

- A. Colors and Textures: As selected by Architect from manufacturer's full range.

2.3 UNIT PAVERS

- A. Concrete Pavers: Solid, interlocking paving units, ASTM C 936, made from normal-weight aggregates in sizes and shapes indicated.

2.4 ACCESSORIES

- A. Steel Edge Restraints: Painted commercial steel edging with loops pressed from or welded to face to receive stakes at 36 inches (900 mm) o.c., and steel stakes 15 inches (380 mm) long for each loop. Size of edging is as follows:

- 1. 3/16 inch (4.8 mm) thick by 4 inches (100 mm) high.

2.5 AGGREGATE SETTING-BED MATERIALS

- A. Sand Setting bed and sand for joints: Comply with ASTM C33

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas indicated to receive paving, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Vacuum clean concrete substrates to remove dirt, dust, debris, and loose particles.
- B. Remove substances, from concrete substrates, that could impair mortar bond, including curing and sealing compounds, form oil, and laitance.
- C. Proof-roll prepared subgrade surface to check for unstable areas and areas requiring additional compaction. Proceed with unit paver installation only after deficient subgrades have been corrected and are ready to receive subbase for unit pavers.

3.3 INSTALLATION, GENERAL

- A. Do not use unit pavers with chips, cracks, voids, discolorations, and other defects that might be visible or cause staining in finished work.
- B. Mix pavers from several pallets or cubes, as they are placed, to produce uniform blend of colors and textures.
- C. Cut unit pavers with motor-driven masonry saw equipment to provide clean, sharp, unchipped edges. Cut units to provide pattern indicated and to fit adjoining work neatly. Use full units without cutting where possible. Hammer cutting is not acceptable.
- D. Joint Pattern: Herringbone with a border of a header course.
- E. Tolerances: Do not exceed 1/8-inch unit-to-unit offset from flush (lippage) for finished surface of paving. Provide slope per drawings.
- F. Provide edge restraints as indicated. Install edge restraints before placing unit pavers.
 - 1. Install edge restraints to comply with manufacturer's written instructions. Install stakes at intervals required to hold edge restraints in place during and after unit paver installation.
 - 2. For metal edge restraints with top edge exposed, drive stakes at least 1 inch (25 mm) below top edge.

3.4 AGGREGATE SETTING-BED PAVER APPLICATIONS

- A. Place leveling course and screed per plan, taking care that moisture content remains constant and density is loose and constant until pavers are set and compacted.

- B. Treat leveling base with soil sterilizer to inhibit growth of grass and weeds.
 - C. Set pavers with a maximum of 1/8 inch, being careful not to disturb leveling base. If pavers have spacer bars, place pavers hand tight against spacer bars. Use string lines to keep straight lines. Fill gaps between units that exceed 3/8 inch with pieces cut to fit from full-size unit pavers.
 - D. Vibrate pavers into leveling course with a low-amplitude plate vibrator capable of a 3500- to 5000-lbf compaction force at 80 to 90 Hz. Perform at least three passes across paving with vibrator. Vibrate under the following conditions:
 - 1. After edge pavers are installed and there is a completed surface or before surface is exposed to rain.
 - 2. Before ending each day's work, fully compact installed concrete pavers to within 36 inches of the laying face. Cover open layers with nonstaining plastic sheets overlapped 48 inches on each side of the laying face to protect it from rain.
 - E. Spread dry sand and fill joints immediately after vibrating pavers into leveling course. Vibrate pavers and add sand until joints are completely filled, then remove excess sand. Leave a slight surplus of sand on the surface for joint filling.
 - F. Do not allow traffic on installed pavers until sand has been vibrated into joints.
 - G. Repeat joint-filling process 30 days later.
- 3.5 REPAIR, POINTING, CLEANING, AND PROTECTION
- A. Remove and replace unit pavers that are loose, chipped, broken, stained, or otherwise damaged or that do not match adjoining units as intended. Provide new units to match adjoining units and install in same manner as original units, with same joint treatment and with no evidence of replacement.

ITEM 61B - PRE-CAST CONCRETE PAVERS

MATERIALS

A. Pavers: Conforming to the following:

- 1. Type: ASTM C936, Hydraulically pressed concrete of 8,000 psi minimum, 28 day strength, maximum absorption of 5% when tested in accordance with ASTM C-140.
- 2. Shape: Rectangular, nominal dimensions of 4"x8"x3 1/8" thick.
- 3. See Architects samples.

- B. Sand for Setting Bed: Clean river or bank sand containing maximum of 30 percent particle size of No. 10 sieve.
- C. Sand for Joints: Clean fine sand as recommended by paver manufacturer.
- D. Geotextile fabric: Mirafi 500 or approved equal.
- E. Edging: Concrete edge restraints.
- F. Sand Joint Sealer: per paver manufacturer recommendation or approved equal.

EXAMINATION

- A. Verify that substrate is level or to correct gradient, smooth, capable of supporting pavers and imposed loads, and ready to receive Work of this section.
- B. Verify gradients and elevations of substrate are correct.

INSTALLATION

- A. Compact subgrade material to 95% maximum density.
- B. Place geotextile material over prepared subgrade. Spread coarse aggregate base course material to the specified compacted thickness. Compact base course to 95% maximum density.
- C. Spread sand evenly over prepared aggregate base course surface to a thickness of one inch.
- D. Dampen and roller compact sand to level and even surface.
- E. Screed and scarify top 1/2 inch of sand.
- F. Place paver units in pattern as indicated on Drawings, from straight reference edge.
- G. Place half units at edge and interruptions. Maintain tight joints.
- H. Sprinkle sand over surface and sweep into joints. Moisten joints and recover with additional sand until firm joints are achieved. Remove excess sand by sweeping only.
- I. Tamp and level paver units with mechanical vibrator until units are firmly bedded, level, and to correct elevation and gradients. Do not tamp unrestrained edges.
- J. Recover with additional sand, sweep into joints and hollow areas

of pavers. Remove excess sand by sweeping only.

K. Seal pavers and joints with approved sealer.

TOLERANCES

A. The final surface elevations shall not deviate more than $\frac{1}{4}$ " under a 10 foot long straightedge.

PROTECTION

A. Do not allow traffic on installed pavers until sand has been vibrated into joints and all edge restraints are in place

ITEM 62 - AIR MONITORING - RESPIRABLE PARTICULATES

REQUIREMENTS:

- A. The United States Environmental Protection Agency ("EPA") views fugitive dust as a potential health hazard. The Bidder will be required to monitor for fugitive dust. Fugitive dust is particulate matter. It is a generic term used to describe a wide range of substances that consist of discrete particles, liquid droplets or solids over a wide range of sizes. When fugitive dust becomes airborne it negatively impacts air quality and human health. Fugitive dust that is most harmful to human health is respirable dust. Respirable dust consists of the fraction of particles that are five (5) microns in size or less.
- B. Samples are to be collected using low-volume vacuum pumps, cyclones and specially prepared cassettes. Sampling methodology is to follow the National Institute of Occupational Safety and Health ("NIOSH") Method 5506 and Method 7300.
- C. Sampling is to be performed using a Higgins-Dewell ("HD") or equivalent cyclone and a tared 5 micro meter (μ m) Polyvinyl Chloride ("PVC") membrane. Samples are to be collected at 2.2 liters per minute ("L/min") for 120 minutes for a total volume of 264 liters. Samples are to be collected during soil excavation and loading activities.
- D. The sampling pump must be calibrated to the appropriate flow rate with a representative sampler in line prior to the collection of samples.
- E. The sampler assembly must not be inverted at any time. Turning the cyclone to anything more than a horizontal orientation may deposit oversized material from the cyclone body onto the filter.

- F. Samples are to be collected in the breathing zone of an average adult (between 5' and 6' above the ground surface).

ANALYTICAL REQUIREMENTS:

- A. Respirable particulate samples are to be analyzed following NIOSH Method 0600.
- B. Two (2) blank samples are to be including in each batch of daily field samples for quality assurance on the sampling procedure.

PRODUCTS

- A. SAMPLE MEDIA: Sampling is to be performed using a Higgins-Dewell ("HD") or equivalent cyclone and a tared 5 micro meter (μ m) Polyvinyl Chloride ("PVC") membrane.

EXECUTION

- A. SAMPLE FREQUENCY: The Bidder shall collect at least four (4) air samples per eight-hour shift per work area for respirable particulates. Submit results to the Environmental Consultant as part of the daily reporting process.

ITEM 63 - STRUCTURE EXCAVATION, BACKFILL AND COMPACTION

GENERAL

1.1 DESCRIPTION OF WORK:

- A. Perform all excavation, grading, backfilling and shoring complete and ready for use, as shown and as specified, including but not necessarily limited to delivery of materials to the project site, storage, distribution, placement compaction, testing; removal of excess material from site and removal of unsatisfactory materials as shown on the drawings and/or specified herein.

1.2 GENERAL REQUIREMENTS:

- A. Extent of Work: The work under this section shall consist of furnishing all labor, supervision, tools, equipment and all materials required to complete the work ready for use, as shown and as specified, including but not necessarily limited to the following:
 - 1. Excavation, removal and disposal of unsatisfactory materials including but not limited to trash, debris, bricks, waste concrete and building materials, peat,

organic soils, rock and unsatisfactory soils as defined in Part 2 of this Section.

2. Excavation and backfill required for new construction, including but not limited to foundations, pits, tanks, paved parking areas, floor slabs on grade, sidewalks, aprons and curbs.
 3. Excavation, grading and compaction of subbase material as specified.
 4. Furnishing, placing and compaction of satisfactory off-site backfill material as required to construct any fill up to top of final subgrades.
- B. All excavation shall be considered unclassified. Pavement, curbing, old foundations, rock, boulders, brick, small structures, and other material encountered of whatever nature, which is required to be removed, and muck or wet material, shall be considered as unclassified excavation.

1.3 JOB CONDITIONS:

A. Existing Utilities

1. Locate existing underground utilities in the areas of work before starting earthwork operations for utilities that are to remain in place, provide adequate means of protection during earthwork operations.
2. Should uncharted or incorrectly charted piping or other utilities be encountered during excavation, consult the project environmental consultant immediately for directions as to procedure. Cooperate with the City, and utility companies in keeping their respective services and facilities in operation. Repair damaged utilities to the satisfaction of the utility city. No extras will be paid for additional utilities encountered or utilities shown in the wrong location.
3. Do not interrupt existing utilities serving facilities occupied and used by the City or others, except when permitted in writing by the Project environmental consultant and then only after acceptable temporary utility services have been provided.

B. Temporary Protection:

1. Contractor is required to backfill with imported clean fill, any and all open excavations continuously and immediately following excavation.
2. Protect structures, utilities, sidewalks, pavements, and other facilities to remain from damages caused by settlement, lateral movement, undermining, washout, and other hazards created by earthwork operations.

PRODUCTS

2.1 DEFINITIONS:

- A. Suitable soil materials are defined as those complying with Unified Soil Classification System soil classification Groups GW, GP, GM, SW, SM and SP. Suitable soil materials shall consist of residual soils and/or decomposed rock obtained from required on site excavations. Suitable soil materials shall be free of organic matter, ice, snow, and shall not contain rock fragments greater than six (3") inches in diameter.
- B. Unsatisfactory Soil Materials: Unsatisfactory soil materials are defined as those in the Unified Soil Classification System classes GC, SC, ML, CL, OL, MH, CH, OH and PT, and other highly organic soils.

2.2 MATERIALS:

- A. Soil Backfill and Fill Materials: Provide satisfactory soil materials for backfill and fill, free of debris, waste, frozen materials, vegetation, and other deleterious matter.
1. Use on-site excavated or off-site borrow material that has been sampled, tested and certified as satisfactory soil material.
 2. Use approved satisfactory soil materials as backfill in all excavations.
 3. All backfill placed shall be compacted and tested as specified herein.

EXECUTION

3.1 PREPARATION:

- A. Examine the areas and conditions under which excavation, backfilling and grading is to be performed and notify the project environmental consultant in writing of conditions detrimental to the proper and timely completion of the work. Do not proceed with the work until unsatisfactory conditions have been corrected in an acceptable manner.
- B. Bottom of excavated areas shall be inspected and approved by the Project environmental consultant prior to backfilling operations.

3.2 EXCAVATION:

- A. Excavation consists of the removal and disposal of materials encountered when establishing the required grade elevations.
- B. Unauthorized excavation consists of removal of materials beyond indicated subgrade elevation or side dimensions without specific direction of the project environmental consultant.
 - 1. Under footings, foundation bases, or retaining walls, fill the unauthorized excavation by extending the indicated bottom elevation of the footing or base to the excavation bottom, without altering the required top elevation. Lean concrete may be used to bring elevations to the proper position, if approved by the Project environmental consultant.
 - 2. Elsewhere, backfill and compact unauthorized excavations as specified for authorized excavations of the same classification, unless otherwise directed by the Project environmental consultant.

3.3 STABILITY OF EXCAVATIONS:

- A. Slope the sides of excavations to comply with State, local codes and ordinances having jurisdiction. Shore and brace where sloping is not possible either because of space restrictions or stability of material excavated.
- B. Maintain sides and slopes of excavations in a safe condition until completion of backfilling.
- C. Any damage due to settlement because of failure to use sheeting or because of inadequate bracing, or through negligence or fault of the Bidder in any manner, shall be

repaired at the Bidder's expense.

3.4 SHORING AND BRACING:

- A. Provide materials for shoring and bracing, such as sheet piling, uprights, stringers and cross-braces, in good serviceable condition.
- B. Maintain shoring and bracing in excavations regardless of the time period excavations will be open. Carry down shoring and bracing as the excavation progresses.

3.5 DEWATERING:

- A. Dewatering shall be in accordance with all applicable regulations of fish and wildlife agencies and statutes relating to the prevention and abatement of water pollution shall be complied with.
- B. Prevent surface water and subsurface or groundwater from flowing into excavations, and flooding the project site and surrounding area.
- C. Remove water from excavations to prevent softening of foundation bottoms, undercutting footings, and soil changes detrimental to the stability of subgrades and foundations. Provide and maintain pumps, sumps, suction and discharge lines, and other dewatering system components necessary to convey the water away from the site until all backfill is completed, or concrete work is dry and properly set, or pipe work or structures have been completed and sufficient backfill placed to prevent water damage. Pumping shall be continuous when necessary to protect the work.
- D. Convey water removed from excavations and rain water to collecting or runoff areas. Do not use trench excavations for site utilities as temporary drainage ditches.
- E. It is the Bidder's responsibility to protect all structures from flotation during the term of the Contract.

3.6 MATERIAL STORAGE:

- A. Stockpile excavated materials classified as satisfactory soil material where directed, until required for fill. Place, grade, and shape stockpiles for proper drainage.
- B. Legally dispose of excess unsatisfactory soil material and excess satisfactory soil material, trash and debris, off-site.

3.7 EXCAVATION FOR APRONS, SIDEWALKS AND SLAB-ON-GRADE:

- A. Cut the surface under aprons, sidewalks and pavements to comply with cross-sections, elevations and grades as shown.

3.8 REMOVAL OF UNSATISFACTORY SOIL MATERIALS:

- A. Excavate unsatisfactory soil materials encountered that extend below the bottom of undercutting elevations, to the additional depth directed by the project environmental consultant.
- B. Excess or unsatisfactory materials excavated on the site which cannot be used in fill or embankment areas shall be removed from the site and disposed of by the Bidder.

3.9 COLD WEATHER PROTECTION:

- A. Protect excavation bottoms against freezing when the atmospheric temperature is less than 35 degrees F.

3.10 PROOF ROLLING:

- A. Equipment used for proof rolling shall be self propelled vibratory steel drum roller imparting a total static and dynamic force of at least 300 pounds per inch of drum width.
- B. Proof roll area before filling begins, to detect soft or yielding soils. Correct soft or yielding areas by scarifying and drying or moistening as conditions warrant.
- C. Re-compact and proof roll area again to verify soil stability.
- D. If, in the opinion of the soil testing and inspection service representative the unstable areas require undercutting, undercut the area as directed and refill with suitable material. Refer to Paragraph 3.1.
- E. The project environmental consultant is to be notified at least 48 hours prior to any proof rolling operation. All proof rolling operations are to be performed in the presence of the project environmental consultant or his appointed representative.

3.11 BACKFILL, FILL AND STRUCTURAL BACKFILL COMPACTION REQUIREMENTS:

- A. Before commencing with compacted fill, remove topsoil, scarify and proof-roll existing grade.

- B. Control soil compaction during construction for compliance with the percentage of maximum dry density specified in accordance with ASTM D1557.
- C. Compact fill and backfill in maximum lifts of eight (8) inches, at optimum moisture content, with a vibratory smooth drum roller (minimum 10-ton static roller).
- D. Use hand-held mechanical tampers for compaction of backfill within ten (10) feet of walls. Install backfill equally on both sides of walls. Place fill in maximum lifts of four (4) inches for material compacted by hand operated tampers.
- E. Boulders and masonry rubble where permitted in backfill shall be placed so that they do not extend to within three (3) feet of the proposed grade and to within three (3) feet of any structure, conduit or pipe.
- F. Percentage of Maximum Density Requirements: All fill and backfill, shall be compacted in maximum 8-inch thick lifts to a minimum of 95 percent of maximum dry density. During placement and compaction, the moisture content of fill, backfill and structural backfill material shall be not more than 2 percent above or below the optimum moisture content. Compacted fill under foundation slabs and footings shall be compacted in maximum 8-inch thick lifts to a minimum of 98 percent of maximum dry density. Non-structural compacted fill (lawns and unpaved areas) shall be compacted to a minimum of 92 percent of maximum dry density.
- G. Moisture Control
 - 1. Where the subgrade or layer of soil material must be moisture conditioned before compaction, uniformly apply water to the surface of subgrade, or layer of soil material.
 - 2. Remove and replace, or scarify and air dry, soil material that is too wet to permit compaction to specified density, to prevent free water appearing on the surface during or subsequent to compaction operations.
 - 3. Soil material that has been removed because it is too wet to permit compaction may be stockpiled or spread and allowed to dry. Assist drying by discing, harrowing or pulverizing, until the moisture content is reduced to a satisfactory value, as detailed by moisture-density relation tests.
- H. Grading:

1. General: Uniformly grade areas within the limits of site grading under this section, including adjacent transition areas. Smooth finished surfaces within specified tolerances, compact with uniform levels or slopes between points where elevations are shown, or between such points and existing grades.

3.12 FIELD QUALITY CONTROL:

A. Testing Laboratory:

1. Tests to determine conformance with all requirements for all Bidder-secured materials proposed for use shall be performed by an independent commercial laboratory retained and compensated by the Bidder and approved by the project environmental consultant.
2. On-site quality control testing shall be performed during construction to determine conformance with plans and specifications by an independent laboratory retained and compensated by the bidder. Frequency of sampling and testing shall be as specified in this Section.
3. Testing laboratory shall furnish the Bidder, project environmental consultant and City with copies of all reports and certificates regarding tests and inspections of equipment, materials and completed work. Testing laboratory shall furnish the project environmental consultant a sampling schedule to give the project environmental consultant an opportunity to observe the sampling.

B. Samples and tests of the subgrades and fill layers shall be taken as follows:

1. Each truck load of backfill material hauled from an off-site borrow area shall be tested to insure that it is satisfactory as specified in this Section.
2. Sidewalk, Aprons, Proposed and Parking Areas: Make at least one field density test for each lift of the subgrade and sub-base for every 1000 sq. ft. of overlaying building slab, sidewalk, apron or roadway area.

C. The compacted dry weight density per cubic foot of all subgrade soils and all fill material shall be controlled by comparing field densities with maximum dry densities determined in accordance with ASTM D1557, "Test Methods for Moisture-Density Relations of Soils using 10-lb. (4.5 -kg) Rammer and 18-in. (457 mm) Drop (Modified Proctor), or ASTM D2049, "Test Method for Relative Density of Cohesionless Soils", as applicable. At least three (3) maximum dry density tests (ASTM D1557 or D2049 as applicable) shall be

performed on each different type of soil encountered in the subgrade or used for fill as determined by the Unified Soil Classification System.

- D. The in-place density of subgrade soils and fill material shall be determined in the field in accordance with ASTM D1556, "Test Method for Density of Soil in Place by the Sand-Cone Method" or by ASTM D2922, "Test Methods for Density of Soil and Soil-Aggregate in Place by Nuclear Methods," and ASTM D3017, "Moisture Content of Soil and Soil-Aggregate in Place by Nuclear Methods."
- E. If determined by the project environmental consultant that any lift does not meet the specified percent of the maximum dry density the Bidder shall be required to dig test holes, as directed by the project environmental consultant at various levels, throughout the backfill, at the Bidders expense, so that additional tests may be taken. If the additional tests indicate unsatisfactory compaction the Bidder shall remove all unsatisfactory backfill and re-compact same to the required standards at his expense.

3.13 DISPOSAL OF EXCESS AND WASTE MATERIALS:

- A. Remove all waste materials and excess satisfactory materials, excavated material classified as unsatisfactory soil material, trash and debris, from the City's property and legally dispose of it.

3.14 UNDERGROUND UTILITIES:

- A. The Bidder shall be responsible for locating all underground structures and utilities, such as water mains, sewers, telephone and electric conduits, etc., and above ground utilities, which may be encountered during construction operations. Test holes shall be dug to determine the position of the underground structures and utilities, or the bidder shall arrange with the City of such underground structures and utilities to assign a representative to mark the locations. The Bidder shall pay the cost of digging test holes and likewise he shall pay the cost of the service of the representatives of the City of such utilities for locating the said utilities. The cost of determining the locations is to be included in the prices bid. The location of existing structures and utilities as shown in the contract documents is simply for the guidance of the bidder and have not been field located and, since the information is as furnished by the respective utilities, or taken from non-as-built plans, the project environmental consultant is not responsible for the accuracy of the plans in this respect.

- B. Anyone utilizing these contract documents for construction is advised to confirm with the requirements of prior to excavation.

ITEM 64 - METAL AND PAH CONTAMINATED EARTHWORK

MATERIALS:

- A. On-site Imported Clean Fill: All regions will require two feet of imported clean fill.
1. Soil/material eligible for re-use shall comply with the standards that are set forth within the Delaware Department of Natural Resources and Environmental Control Policy for Soil/Material Re-Use at Hazardous Substance Cleanup Act (HSCA) regulated sites.
 2. The imported clean fill shall be tested in accordance with the Delaware Department of Natural Resources and Environmental Control Policy for Soil/Material Re-Use at Hazardous Substance Cleanup Act (HSCA) regulated sites.
- B. Demarcation layer (geo-textile material) specifications for the geo-textile material shall be approved by the project environmental consultant.
- C. Bidder shall control moisture content for all soil materials; moisture content shall not impact designation of "satisfactory" or "unsatisfactory" soil materials.

SCOPE OF WORK:

- A. The scope of the project includes the excavation, consolidation of approximately 4,300 cubic yards of lead, arsenic, chromium, vanadium and PAH contaminated soils at the property identified as Tax Parcel # 18-014.00-266 located at the intersection of Paper Mill Road and Old Paper Mill Road in the City of Newark, New Castle County, Delaware. The goal of the project is to consolidate all areas of impacted soil in conjunction with capping to reduce the overall footprint of impacted soils left on-site. The area of soil consolidation is part of four (4) regions. Region #1 will be capped with two (2) feet of imported clean fill. Region #2 will consist of removing two (2) feet of soil (approximately 800 cubic yards) and relocating the soil beneath a designated capping area. The excavation will be replaced with two (2) feet of imported clean fill. Region #3 will consist of removing two (2) feet of soil (approximately 3,500 cubic yards) and relocating the soil beneath a capped area. The excavation will be replaced with imported clean fill. Region #4 will be capped with two (2) feet of imported clean fill and

asphalt. The capping areas will be set in the field by the project environmental consultant. All areas containing concrete slabs and asphalt shall be punctured to allow surface water to infiltrate into the subsurface soils.

PREPARATION:

- A. Prior to all work of this section, the Bidder shall become thoroughly familiar with the site conditions and all portions of the work falling within this section.
- B. The Bidder shall refer to applicable soil erosion and sediment control plans for all earthwork operations and for soil erosion control measures to be implemented prior to commencement of earthwork.
- C. Bidder shall be responsible to locate and identify all existing utilities and groundwater monitoring wells that are to remain and protect them from damage.
- D. Bidder shall notify utility companies and provide sufficient time for such companies to allow removal and/or relocation of any utilities that are in conflict with the proposed improvements.
- E. Bidder shall protect any such fences, ground water monitoring wells, structures, sidewalks, paving, curbs, etc. to remain, from damage from his equipment and vehicular traffic.
- F. Bidder shall protect benchmarks, property corners and all other survey monuments from damage or displacement. If a marker needs to be removed or relocated, Bidder shall be responsible to have it referenced by a licensed land surveyor and replaced, as necessary, by same at no additional cost to the City.
- G. Bidder shall remove and properly stockpile on the site, any material encountered in during excavating operations that, in the opinion of the City or City's Project Environmental Consultant, is unsuitable or undesirable for fill material.
- H. Bidder should contact project environmental consultant if contaminated soil is encountered during any construction activities on-site.

GENERAL PROCEDURES:

- A. Identify required lines, levels, contours and datum to bring site grades to within six inches (6") of proposed finish grade.

- B. Do not allow or cause any of the work performed or installed to be impacted upon prior to satisfactory completion all inspections, tests and approvals.
- C. By submitting this bid, the Bidder represents that the provided information has been reviewed and the site has been investigated to determine type, quantity, quality, and excavation and consolidation to be performed.
- D. Perform grading and excavation work, etc. using capable, well maintained equipment and methods acceptable to the City, the project environmental consultant and applicable governing agencies.
- E. When performing grading and excavation operations during periods of prolonged wet or dry weather, provide adequate measures to ensure proper surface drainage, groundwater control and moisture control of soils (i.e., wetting or drying) so as to place and compact the soil within the moisture content range a few percentage points of its optimum water content. Any disturbed areas should be proof-rolled at the end of each day.
- F. Per the request of the Division of Fish and Wildlife and the United States Department of the Interior Park Service, tree and shrub removal is prohibited between April 1 and July 31 to reduce impacts to any migratory birds.
- G. Any required shoring, bracing and/or fencing shall be installed in accordance with Federal OSHA requirements as well as the requirements of all state and local authorities having jurisdiction.
- H. Bidder shall prepare and submit a Site Specific Health and Safety Plan (SSHASP) detailing methods to be employed to protect persons and property from damage and discomfort caused by dust or surface soil run-off. Bidder shall prepare and submit a Dust Suppression Plan to be implemented during periods of excess dryness to quell dust.
- I. Allow no debris to accumulate on-site. Haul debris away from the site and dispose of at no cost to the City.
- J. Stockpile excess earth material at location(s) designated by the City and/or as indicated on the Construction Drawings.
- K. Contractor is required to backfill with imported clean fill.

- L. Contractor is required to backfill, any and all open excavations continuously and immediately following excavation.

PROTECTIVE MEASURES:

- A. The bidder shall take all appropriate and necessary measures to prevent exposure of its employees, the employees of sub-bidders and all other workers and visitor's to the site to contaminated soils that exhibit compounds above the Uniform Risk-based Standards. Personal protective equipment and measures to provide such protection shall be incorporated into the SSHASP prepared by the Bidder.
- B. The bidder shall take all appropriate and necessary measures to prevent dust from on-site activities from migrating off-site or from impacting other surfaces, soil, water, air or other media. In addition, the Bidder shall also take all appropriate and necessary measures to prevent surface water run-off and/or metals/PAH contaminated mud from migrating off-site or from impacting other non-contaminated surfaces, drains, neighboring property, access roads and/or highways or other media or surfaces.

GROUND SURFACE PREPARATION:

- A. Remove vegetation, debris, demolition debris, unsatisfactory soil materials, obstructions, and deleterious materials from the project work area prior to beginning grading and excavation work, etc. Grade and consolidate surfaces so as to match proposed grades.
- B. Puncture concrete and asphalt areas to allow for surface drainage to infiltrate into subsurface soils.

BACKFILLING AND COMPACTION:

- A. General: Control soil compaction during placement of soil and imported clean fill material for each area classification as indicated below.

GRADING:

- A. General:
 - 1. Uniformly grade areas within limits of grading under this section, including adjacent transition areas.
 - 2. Smooth finish surfaces within adjacent transition areas.

3. Smooth finish surfaces within specified tolerances, compact with uniform levels or slopes between points where elevations are indicated, or between such points and existing grades.
- B. Compaction: After grading, compact subgrade surfaces to the depth and indicated percentage of maximum dry density for each area classification.
- C. Contaminated soil: Any soil exceeding DNRECS soil standards shall be hauled off-site and disposed of at a certified facility.

FIELD QUALITY CONTROL:

- A. Quality Control (QC) Firm: Tests to determine conformance with the requirements for all Bidder-secured materials proposed for use shall be performed by an independent experienced firm retained, approved and compensated by the City.

MAINTENANCE:

- A. Protection of Graded Areas:
 1. Protect newly graded areas from traffic and erosion.
 2. Keep free of trash and debris.
 3. Repair and re-establish grades in settled, eroded, and rutted areas to specified tolerances.
- B. Reconditioning Compacted Areas: Where completed compacted areas are disturbed by on-site activities conducted by the Bidder or adverse weather, the Bidder shall be responsible to re-scarify the impacted surface, reshape, and compact to required density prior to demobilization off-site.
- C. Settling: Where settling is measurable or observable at previously excavated areas during general project warranty period, the Bidder shall be required to add additional backfill material as necessary, reshape and compact to required density.
- D. Stock Pile Protection: Bidder shall stabilize any contaminated stock piles before any predicted 100 year storm occurs. Gorilla-Snot stabilization material or alike should be approved by the Project Environmental Consultant.

DISPOSAL OF EXCESS AND WASTE MATERIALS:

- A. Excess or unsatisfactory materials excavated on the site shall be transported off-site and properly disposed.

- B. Contractor shall remove the above ground storage tank located adjacent to Region #1.

UNDERGROUND UTILITIES:

- A. The Bidder shall be responsible for locating all underground structures and utilities, such as water mains, sewers, telephone and electric conduits, etc., and above ground utilities, which may be encountered during construction operations. Test holes shall be dug (as necessary) to determine the position of the underground structures and utilities, or the bidder shall arrange with the City's of such underground structures and utilities to adequately mark the locations. The Bidder shall be responsible for the cost of digging test holes and likewise he shall be responsible for any and all costs of the service of the City's of such structures/utilities for locating the said structures/utilities. The cost of determining the locations is to be included in the price bid.

The location of existing structures and/or utilities as shown in the contract documents is simply for the guidance of the bidder and have not been field verified and/or professionally surveyed. Since the information is presented for relational purposes only, neither the City or the project environmental consultant is responsible for the accuracy of the plans in this respect.

ITEM 65 - PLANTING

GENERAL

1.1 SUMMARY

- A. Section includes preparation of topsoil bedding; new trees; mulch and fertilizer; maintenance; and tree pruning.

1.2 REFERENCES

- A. ANSI A300 - Pruning Standards for Woody Plants.
- B. ANSI Z60.1 - Nursery Stock.
- C. ISA (International Society of Arborists) - Certification documentation for tree pruning Qualifications.
- D. NAA (National Arborist Association) - Certification documentation for tree pruning Qualifications.
- E. American Standards for Nursery Stock, latest edition.

F. Delaware Dept. of Transportation (DelDOT), Standard Specifications, latest edition.

G. Section 01 81 13 Sustainable Design Requirements.

1.3 DEFINITIONS

A. Weeds: Include Dandelion, Jimsonweed, Quackgrass, Horsetail, Morning Glory, Rush Grass, Mustard, Lambsquarter, Chickweed, Cress, Crabgrass, Canadian Thistle, Nutgrass, Poison Oak, Blackberry, Tansy Ragwort, Bermuda Grass, Johnson Grass, Poison Ivy, Nut Sedge, Nimble Will, Bindweed, Bent Grass, Wild Garlic, Perennial Sorrel, and Brome Grass.

B. Plants: Living trees, plants, and ground covers specified in this Section, and described in ANSI Z60.1.

1.4 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Product Certificates: For each type of manufactured product, signed by product manufacturer, and complying with the following:

C. Manufacturer's certified analysis for standard products.

D. Analysis of other materials by a recognized laboratory made according to methods established by the Association of Official Analytical Chemists, where applicable.

E. Qualification Data: For landscape Installer.

F. Material Test Reports: For existing surface soil and imported topsoil.

G. Planting Schedule: Indicating anticipated planting dates for exterior plants.

1.5 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: Include pruning objective(s), type(s) and method(s); types, application frequency, and recommended coverage of fertilizer. Submit before expiration of required maintenance periods.

1.6 QUALITY ASSURANCE

A. Tree Pruning: ANSI A300 Pruning Standards for Woody Plants.

B. Maintain one copy of each document on site.

1.7 QUALIFICATIONS

- A. Nursery: Company specializing in growing and cultivating the plants with five years documented experience.
- B. Installer: Company specializing in installing and planting the plants with five years documented experience and approved by nursery.
- C. Tree Pruner: Company specializing in pruning trees with proof of ISA Arborist Certification or NAA Certified Tree Care Specialist.
- D. Maintenance Services: Performed by installer.

1.8 DELIVERY, STORAGE, AND HANDLING

- A. Deliver fertilizer in waterproof bags showing weight, chemical analysis, and name of manufacturer.
- B. Protect and maintain plant life until planted.
- C. Deliver plant life materials immediately prior to placement. Keep plants moist.
- D. Plant material which has been damaged by reason of delivery, storage or handling will be rejected.

1.9 ENVIRONMENTAL REQUIREMENTS

- A. Do not install plant life when ambient temperatures may drop below 35 degrees F or rise above 90 degrees F.
- B. Do not install plant life when wind velocity exceeds 30 mph.
- C. Weather Limitations: Proceed with planting only when existing and forecasted weather conditions permit.

1.10 COORDINATION

- A. Install plant life after and coordinate with installation topsoil and seeding and/or sodding.
- B. Planting Restrictions: Plant during one of the following periods. Coordinate planting periods with maintenance periods to provide required maintenance from date of Substantial Completion.
 - 1. Spring Planting: March 1 to May 15.
 - 2. Fall Planting: August 15 to October 15.

1.11 WARRANTY

- A. Provide two (2) year warranty for trees, plants, and ground cover. Period of warranty begins with final acceptance of the project by the Owner. The contractor shall water all plants as required to sustain them in a healthy condition. The owner shall notify the contractor when watering is needed. The contractor must complete this watering within 48 hours of notification.

1.12 MAINTENANCE SERVICE

- A. Maintain plant life for three (3) months after Date of Substantial Completion.
- B. Maintenance to include:
 - 1. Cultivation and weeding plant beds and tree pits.
 - 2. Applying herbicides for weed control. Remedy damage resulting from use of herbicides.
 - 3. Remedy damage from use of insecticides.
 - 4. Irrigating sufficient to saturate root system.
 - 5. Pruning, including removal of dead or broken branches.
 - 6. Disease control.
 - 7. Replacement of mulch.

1.13 SUBSTITUTIONS

- A. If a plant is found not to be suitable or available, the Contractor shall notify the Landscape Architect before bidding and the Landscape Architect will notify the Project Manager for the Owner for approval.
- B. The Owner or Landscape Architect will consider reasonable alternatives.
- C. Following bidding, if a substitute is required, it must be of the same size, and quality as the original specified plant.

1.14 REPLACEMENTS AND CONSIDERATIONS

- A. Replacements will be made during the next planting period unless the Contractor agrees to an earlier date.
- B. There will be a one time full replacement policy.
- C. A replacement will be of the same size as the original with no additional soil additives to be used.
- D. The Contractor will not be responsible for plant material that has been damaged by vandalism, fire, removal, relocation or other activities beyond the Contractor's control.

- E. Plant losses due to abnormal weather conditions such as floods, excessive wind damage, drought, severe freezing or abnormal rains will in no way be the responsibility of the Contractor.
- F. Groundcovers, broadleaf evergreens, red, willow and scarlet oaks and all conifers except white pines will not be planted between November 15 and March 15. An exception would be considered if the Contractor states in writing that he will guarantee plant material at this time.

PART 2 PRODUCTS

2.1 TREES, PLANTS, AND GROUND COVER

- A. Planting Stock:
 - 1. All plants shall be true to type and name in accordance with the latest edition of Standardized Plant Names, official code of the American Joint Committee on Horticulture Nomenclature, and each bundle or each plant, when not tied in bundles, shall be labeled properly.
 - 2. All plants shall have a well-branched, vigorous and balanced root and top growth and, unless otherwise specified, shall be No. 1 Grade conforming to "American Standard for Nursery Stock" of the American Association of Nurserymen (AAN). They shall be free from disease, injurious insects, mechanical wounds, broken branches, decay or any other defect. Trees shall have reasonably straight trunks with well balanced tops and a single leader. Deciduous plants, other than those specified as container grown, shall be dormant.
- B. Trees: Species and size identifiable in plant schedule, grown in climatic conditions similar to those in locality of the Work.

2.2 SOIL MATERIALS

- A. Topsoil: As specified

2.3 SOIL AMENDMENT MATERIALS

- A. If soil tests indicate soil amendment, apply soil conditioners/fertilizers to amend soil to specified conditions.
 - 1. Tree Fertilizer: Containing fifty percent of the elements derived from organic sources; of proportion necessary to eliminate any deficiencies of topsoil, as indicated in analysis.
 - 2. Peat Moss: Shredded, loose, sphagnum moss; free of lumps, roots, inorganic material or acidic materials; minimum of

- 85 percent organic material measured by oven dry weight, pH range of 4 to 5; moisture content of 30 percent.
3. Bone Meal: Raw, finely ground, commercial grade, minimum of 3 percent nitrogen and 20 percent phosphorous.
 4. Lime: Ground limestone, dolomite type, minimum 95 percent carbonates.
 5. Water: Clean, fresh, and free of substances or matter which could inhibit vigorous growth of plants.

2.4 MULCH MATERIALS

- A. Mulching Material: Composted, shredded hardwood bark, dark brown in color.

2.5 TOP SOIL MIX

- A. A uniform mixture of 1 part peat and 3 parts topsoil by volume.

2.6 SOURCE QUALITY CONTROL AND TESTS

- A. Provide testing and analysis of existing topsoil.
- B. Analyze to ascertain percentage of nitrogen, phosphorus, potash, soluble salt and organic matter; pH value.
- C. Testing is not required if recent tests are available for imported topsoil. Submit these test results to the testing laboratory. Indicate, by test results, information necessary to determine suitability.

2.7 STAKES AND GUYS

- A. Upright and Guy Stakes: Rough-sawn, sound, new hardwood, redwood, or pressure-preservative-treated softwood, free of knots, holes, cross grain, and other defects, 2 by 2 inches by length indicated, pointed at one end.
- B. Guy and Tie Wire: ASTM A 641/A 641M, Class 1, galvanized-steel wire, 2-strand, twisted, 0.106 inch in diameter.
- C. Guy Cable: 5-strand, 3/16-inch diameter, galvanized-steel cable, with zinc-coated turnbuckles, a minimum of 3 inches long, with two 3/8-inch galvanized eyebolts.
- D. Hose Chafing Guard: Reinforced rubber or plastic hose at least 1/2 inch in diameter, black, cut to lengths required to protect tree trunks from damage.
- E. Flags: Standard surveyor's plastic flagging tape, white, 6 inches long.

- F. As an alternative to Guy and Tie Wire assembly, black plastic tree chain may be utilized.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify that prepared subsoil is ready to receive work.
- B. Saturate soil with water to test drainage.
- C. Verify that required underground utilities are available, in proper location, and ready for use.

3.2 PREPARATION OF SUBSOIL

- A. Prepare subsoil to eliminate uneven areas. Maintain profiles and contours. Make changes in grade gradual. Blend slopes into level areas.
- B. Remove foreign materials, weeds and undesirable plants and their roots. Remove contaminated subsoil.
- C. Scarify subsoil to a depth of 6 inches where plants are to be placed. Repeat cultivation in areas where equipment, used for hauling and spreading topsoil, has compacted subsoil.
- D. Dig pits and beds three times wider than plant root system.

3.3 PLACING TOPSOIL

- A. Spread topsoil to a minimum depth of 6 inches over area to be planted. Rake smooth.
- B. Place topsoil during dry weather and on dry unfrozen subgrade.
- C. Remove vegetable matter and foreign non-organic material from topsoil while spreading.
- D. Grade topsoil to eliminate rough, low or soft areas, and to ensure positive drainage.
- E. Install topsoil into pits and beds intended for plant root balls, to a minimum thickness of 6 inches.

3.4 FERTILIZING

- A. Apply a starter fertilizer.
- B. Apply after initial raking of topsoil.

- C. Mix thoroughly into upper 2 inches of topsoil.
- D. Lightly water to aid the dissipation of fertilizer.

3.5 PLANTING

- A. Place plants for best appearance for review and final orientation by Architect/Engineer.
- B. Set plants vertical.
- C. Remove all non-biodegradable root containers, string and twine.
- D. Set plants in pits or beds. Remove burlap, ropes, and wires, from the top half of root ball after the plants have been placed in the hole at the proper depth and are plumb.
- E. Place bare root plant materials so that roots lie in a natural position. Backfill soil mixture in 6 inch layers. Maintain plant life in vertical position.
- F. Saturate soil with water when the pit or bed is half full of topsoil and again when full.
- G. If pruning trees is required, lightly prune trees in accordance with ANSI A300 Maintenance Pruning Type: Crown Cleaning.
- H. If plants are containerized, after removing plants from containers break apart the root balls to free up the roots prior to placing the plant in the hole.

3.6 GUYING AND STAKING

- A. Upright Staking and Tying: Stake trees of 2- through 5-inch caliper. Stake trees of less than 2-inch caliper only as required to prevent wind tip-out. Use a minimum of 2 stakes of length required to penetrate at least 18 inches below bottom of backfilled excavation and to extend at least 72 inches above grade. Set vertical stakes and space to avoid penetrating root balls or root masses. Support trees with two strands of tie wire encased in hose sections at contact points with tree trunk. Allow enough slack to avoid rigid restraint of tree. Use the number of stakes as follows:
- B. Use 2 stakes for trees up to 12 feet high and 2-1/2 inches or less in caliper; 3 stakes for trees less than 14 feet high and up to 4 inches in caliper. Space stakes equally around trees.
- C. Guying and Staking: Guy and stake trees exceeding 14 feet in height and more than 3 inches in caliper, unless otherwise

indicated. Securely attach no fewer than 3 guys to stakes 30 inches long, driven to grade.

- D. For trees more than 6 inches in caliper, anchor guys to pressure-preservative-treated deadmen 8 inches in diameter and 48 inches long buried at least 36 inches below grade. Provide turnbuckles for each guy wire and tighten securely.
- E. Attach flags to each guy wire, 30 inches above finish grade.
- F. Tree Chain - Tree chain shall be used as an alternative to traditional staking methods. Install according to manufacturer's specifications and recommendations.

3.7 PLANTING BED MULCHING

- A. Mulch backfilled surfaces of planting beds and other areas indicated.
- B. Organic Mulch: Apply 3-inch average thickness of organic mulch, and finish level with adjacent finish grades. Do not place mulch against plant stems.

3.8 CLEANUP AND PROTECTION

- A. During exterior planting, keep adjacent pavings and construction clean and work area in an orderly condition.
- B. Protect exterior plants from damage due to landscape operations, operations by other contractors and trades, and others. Maintain protection during installation and maintenance periods. Treat, repair, or replace damaged exterior planting.

3.9 DISPOSAL

- A. Disposal: Remove surplus soil and waste material, including excess subsoil, unsuitable soil, trash, and debris, and legally dispose of them off Owner's property.

3.10 FIELD QUALITY CONTROL

- A. Plants will be rejected if a ball of earth surrounding roots has been disturbed or damaged prior to or during planting.

3.11 SCHEDULE - PLANT LIST

- A. Planting schedule as shown on the plans and details.

CITY OF NEWARK

Delaware

CONTRACT NO. 13-13

CURTIS PAPER MILL REMEDIATION AND PARK CONSTRUCTION

PROPOSAL

To: The Mayor and City Council
Newark, Delaware

From: _____

The undersigned as a lawfully authorized agent for the below named bidder has carefully examined the Bid Documents to be known as Contract No. 13-13 and binds himself on award to him by the Mayor and City Council of Newark, Delaware to execute in accordance with such award, a contract of which this Proposal and said General Provisions and Specifications and any Addenda shall be a part, and to furnish the goods as specified F.O.B. Newark, Delaware in a manner that is in complete accordance with said General Provisions and Specifications at the following named unit price on or before the delivery period stated below:

<u>Bid Item</u>	<u>Item Description</u>	<u>Amount</u>
-----------------	-------------------------	---------------

1	Curtis Paper Mill Remediation And Park Construction	\$ _____
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Total Bid\$ _____

CITY OF NEWARK

Delaware

CONTRACT NO. 13-13

CURTIS PAPER MILL REMEDIATION AND PARK CONSTRUCTION

PROPOSAL

Project to be Completed by _____

DATE: _____ BIDDER: _____

By: _____
Its legally authorized representative

PRINT NAME: _____

TITLE: _____

ADDRESS: _____

CITY, STATE, ZIP: _____

TELEPHONE: _____

BID PROPOSAL FOR CITY OF NEWARK CONTRACT NO. 13-13
CURTIS MILL PARK

<u>Item</u>			<u>UNIT</u>		
<u>Number</u>	<u>DESCRIPTION</u>	<u>UNIT</u>	<u>PRICE</u>	<u>QUANTITY</u>	<u>COST</u>
	CONTRACTOR MOBILIZATION	LS		1	
1	CLEARING AND GRUBBING, MISC. DEMO	AC		4	
1	RELOCATE EXISTING SOIL PILES TO CONSOLIDATION AREA	LS		1	
2	EXCAVATION & EMBANKMENT				
	SITE EARTHWORK	CY		12000	
	ENTRANCE IMPROVEMENTS	CY		297	
2A	EROSION AND SEDIMENT CONTROL	LS		1	
2E	UNDERCUT EXCAVATION	CY		70	
4	SELECTIVE DEMO OF EXISTING CONCRETE BUILDING PAD	LS		1	
5A	GRADED AGGREGATE BASE COURSE, TYPE B				
	UNDER SITE PAVEMENT	CY		463	
	UNDER SITE WALKING PATH	CY		105	
	UNDER SITE SIDEWALK	CY		27	
	UNDER PCC 1-6 CURB	CY		3	
	UNDER PLAZA CONCRETE	CY		16	
	ENTRANCE IMPROVEMENTS	CY		185	
5B	BORROW, TYPE A	CY		70	
6	SELECTIVE DEMO OF EXISTING BITUMINOUS PAVEMENT	LS		1	
6	REMOVE EXISTING STORAGE TANKS	ALLOWANCE		1	
6	REMOVAL OF EXISTING UNDERGROUND PIPES AND STRUCTURES	LS		1	
17	REINFORCED CONCRETE PIPE, 18", CLASS IV	LF		6	
21B	CORRUGATED POLYETHYLENE PIPE, TYPE S, 18" DIAMETER	LF		248	
21C	CORRUGATED POLYETHYLENE PIPE FLARED END SECTION, 18" DIAMETER	EACH		3	

BID PROPOSAL FOR CITY OF NEWARK CONTRACT NO. 13-13
CURTIS MILL PARK

<u>Item</u>			<u>UNIT</u>		
<u>Number</u>	<u>DESCRIPTION</u>		<u>UNIT</u>	<u>PRICE</u>	<u>QUANTITY</u>
21D	PERFORATED SCH. 40 PVC UNDERDRAIN, INCLUDING FILTER FABRIC AND DE NO. 57 STONE		LF		256
25C	PCC 1-8 CURBING		LF		711
25D	PCC 1-6 CURBING		LF		193
26	CONCRETE SIDEWALK				
		ON-SITE (CAP) - 4" 3,500 PSI WITH FIBER REINFORCEMENT	SF		3800
		ENTRANCE IMPROVEMENTS	SF		811
26B	CURB RAMP, TYPE 2, 3 AND/OR 4		SF		340
26C	SIDEWALK SURFACE DETECTABLE WARNING SYSTEM		SF		40
26D	CURB RAMP, TYPE 1		SF		101
27A	DRAINAGE INLET, 34" X 24"		EACH		1
27B	DRAINAGE INLET, 48" X 30"		EACH		1
27C	ADJUSTING AND REPAIRING EXISTING DRAINAGE INLET		EACH		3
27D	ADJUST AND REPAIR EXISTING SANITARY MANHOLE		EACH		1
27E	CLEANING DRAINAGE PIPE, 15"-24" DIA.		LF		86
29	IMPORT AND SPREAD TOPSOIL				
		(CAP) - 6" DEPTH	CY		2300
		ENTRANCE IMPROVEMENTS	CY		75
31	PERMANENT GRASS SEEDING ENTRANCE IMPROVEMENTS		SY		445
31A	SEED MIX 'A' MEADOW GRASS		SY		15786
31B	SEED MIX 'B' WETLAND MEADOW		SY		6611
31C	SEED MIX 'C' LAWN		SY		4659
37B	RIPRAP, R-4		TON		27
39A	WMA, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 76-22 (CARBONATE STONE)		TON		514
39B	WMA, SUPERPAVE, TYPE B, 160 GYRATIONS, PG 76-22		TON		128

**BID PROPOSAL FOR CITY OF NEWARK CONTRACT NO. 13-13
CURTIS MILL PARK**

<u>Item</u>		<u>UNIT</u>			
<u>Number</u>	<u>DESCRIPTION</u>	<u>UNIT</u>	<u>PRICE</u>	<u>QUANTITY</u>	<u>COST</u>
39C	WMA, SUPERPAVE, BITUMINOUS CONCRETE BASE COURSE, 160 GYRATIONS, PG 64-22	TON		347	
39D	SAW CUTTING	LF		1062	
39E	WMA, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 64-22	TON		387	
39F	WMA, SUPERPAVE, TYPE B, 160 GYRATIONS, PG 64-22	TON		473	
46	PAVEMENT MILLING	SY-IN		3771	
47	GEOTEXTILES	SY		2775	
49A	PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, WHITE/YELLOW, 5"	LF		4073	
49B	PERMANENT PAVEMENT STRIPING, SYMBOL/LEGEND, ALKYD-THERMOPLASTIC	SF		1001	
49B	PERMANENT PAVEMENT STRIPING, ALKYD- THERMOPLASTIC, PARKING AREA, BLUE/WHITE 5"	LF		360	
49C	PREFORMED RETROREFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS, BIKE SYMBOL	EA		6	
50A	INSTALLATION OR REMOVAL OF TRAFFIC SIGN ON SINGLE SIGN POST	EA		10	
50A	INSTALLATION OF VAN ACCESSIBLE DISABLED PARKING SIGN	EA		1	
50B	INSTALLATION OR REMOVAL OF TRAFFIC SIGN ON MULTIPLE SIGN POSTS	SF		4	
51A	ADJUST OR REPAIR EXISTING CONDUIT JUNCTION WELL	EA		2	
51B	CONDUIT JUNCTION WELL, TYPE 11	EA		4	
51C	CONDUIT JUNCTION WELL, TYPE 14	EA		1	
51D	FURNISH & INSTALL UP TO 4" SCHEDULE 80 PVC CONDUIT (TRENCH)	LF		182	
51E	FURNISH & INSTALL LOOP WIRE 1-CONDUCTOR #14 AWG ENCASED IN 1/4" FLEXIBLE TUBING IN A LOOP SAWCUT	LF		1277	

BID PROPOSAL FOR CITY OF NEWARK CONTRACT NO. 13-13
CURTIS MILL PARK

<u>Item</u>			<u>UNIT</u>		
<u>Number</u>	<u>DESCRIPTION</u>	<u>UNIT</u>	<u>PRICE</u>	<u>QUANTITY</u>	<u>COST</u>
51F	POLE BASE TYPE 3	EA		4	
51G	POLE BASE TYPE 4	EA		2	
51H	TRAFFIC CONTROL DEVICE EQUIPMENT TURN ON, PICK UP, REMOVAL & MAINTENANCE, TYPE I	EA		1	
51I	TRAFFIC CONTROL DEVICE EQUIPMENT TURN ON, PICK UP, REMOVAL & MAINTENANCE, TYPE II	EA		1	
51J	BONDING AND GROUNDING OF EXISTING JUNCTION WELL	EA		5	
52	REMOVAL OF EXISTING PORTLAND CEMENT CONCRETE PAVEMENT, CURB, SIDEWALK, ETC.	SY		1250	
54	PIPE VIDEO INSPECTION	LF		86	
55	FIELD OFFICE - TYPE II	EAMO		1	
56	PROJECT CONTROL SYSTEM DEVELOPMENT PLAN	LS		1	
57	CPM SCHEDULE UPDATES AND/OR REVISED UPDATES	EAMO		3	
58	MAINTENANCE OF TRAFFIC	LS		1	
59	CONSTRUCTION ENGINEERING	LS		1	
60	SITE FURNISHINGS				
	PICNIC TABLE TYPE 'A'	EA		1	
	PICNIC TABLE TYPE 'B'	EA		1	
	PEDESTRIAN BENCHES TYPE 'C'	EA		2	
	INFORMATION SIGN	EA		3	
	BICYCLE HITCHING STATION	EA		6	
	PARKING STOPS	EA		14	
	BRICK PIERS (2)	LS		1	
61A	CONCRETE PAVER AND SAND FOR PLAZA (CAP)	SF		1662	
61B	BLUESTONE PAVERS FOR PLAZA (CAP)	SF		64	
61B	PLAZA CONCRETE EDGE RESTRAINT WITH (2) #4 REBAR REINFORCEMENT	LF		151	
63	IMPORT CLEAN FILL FOR FILLING OF FORMER RACEWAY	CY		500	

BID PROPOSAL FOR CITY OF NEWARK CONTRACT NO. 13-13
CURTIS MILL PARK

<u>Item</u>			<u>UNIT</u>		
<u>Number</u>	<u>DESCRIPTION</u>	<u>UNIT</u>	<u>PRICE</u>	<u>QUANTITY</u>	<u>COST</u>
64	EARTHWORK (CONTAMINATE SOIL EXCAVATION AND RELOCATION)	LS		1	
66	TRAFFIC STATEMENT (TRAFFIC CONTRACTOR)	LS		1	
67	UTILITY ADJUSTMENTS/RELOCATIONS	LS		1	
68	REMOVE/ADJUST/INSTALL MONITORING WELLS	EA		4	

TOTAL AMOUNT OF BID = _____

BID PROPOSAL FOR CITY OF NEWARK CONTRACT NO. 13-13
CURTIS MILL PARK - ADD/DEDUCT ALTERNATES FOR PLANTINGS

<u>Item</u>				<u>UNIT</u>	
<u>Number</u>	<u>DESCRIPTION</u>	<u>UNIT</u>	<u>PRICE</u>	<u>QUANTITY</u>	<u>COST</u>
31A	SEED MIX 'A' MEADOW GRASS	SY		(-121)	
31C	SEED MIX 'C' LAWN	SY		(-287)	
32	MULCHING	SY		409	
65	PLANTING				
	'GREEN MOUNTAIN' SUGAR MAPLE (2-2 1/2" CAL.)	EA		3	
	AMERICAN SWEETGUM 'ROTUNDILOBA' (2-2 1/2" CAL.)	EA		5	
	BLACK GUM (2-2 1/2" CAL.)	EA		6	
	'COLUMBIA' LONDON PLANE TREE (2-2 1/2" CAL.)	EA		6	
	SWAMP WHITE OAK (2-2 1/2" CAL.)	EA		10	
	'RED ROCKET' CrapeMyrtle (6'-8' HT.)	EA		4	
	WHITE SPRUCE (6'-7' HT.)	EA		5	
	'CENTENNIAL' CrapeMyrtle (4'-5' HT.)	EA		5	
	'BLUE MIST' CARYOPTERIS (1 QT. POTS MIN.)	EA		5	
	RED KNOCKOUT ROSE (5 GAL.)	EA		2	
	VARIEGATED LIRIOPE (1 QT.)	EA		2910	
	'TETE-A-TETE' DAFFODIL (BULB)	EA		1000	
	'HAMELIN' PENNisetum (1 QT.)	EA		17	

TOTAL AMOUNT OF BID (INCLUDING ADD/DEDUCT ALTERNATES) = _____

CITY OF NEWARK

Delaware

CONTRACT NO. 13-13

CURTIS PAPER MILL REMEDIATION AND PARK CONSTRUCTION

BOND TO ACCOMPANY PROPOSAL

(not necessary if certified or cashier's check is used)

KNOW ALL MEN BY THESE PRESENTS THAT _____
of _____ of the County of _____
_____ and State of _____,
principal, _____ and
of _____ as surety, legally authorized
to do business in the State of Delaware, are held and firmly
bound unto the City of Newark in the sum of
_____ Dollars, to be paid to said City of
Newark for use and benefit of the Mayor and Council of Newark,
for which payment well and truly to be made, we do bind
ourselves, our and each of our heirs, executors,
administrators and successors, jointly and severally, for and
in the whole, by these presents. Sealed with our seal dated
the _____ day of _____, in the year of our
Lord, two thousand and thirteen (2013).

NOW THE CONDITIONS OF THIS OBLIGATIONS IS SUCH, that if the
above bounded principal who has submitted to said City of Newark,
a certain proposal to enter into a certain Contract No. 13-13,
Curtis Paper Mill Remediation And Park Construction, and if said
_____ shall well and truly enter into and
executes said contract and furnish therewith such Surety Bond or

Bonds as may be required by the terms of said contract and approved by said City of Newark, said Contract, and said Bond to be entered into within fourteen (14) days after the date of official notice of award thereof in accordance with the terms of said proposal, then this obligation to be void, otherwise shall remain in full force and virtue.

SIGNED AND SEALED IN THE PRESENCE OF WITNESS:

SIGNED _____ (SEAL)

BY _____ (SEAL)

SIGNED _____ (SEAL)

BY _____ (SEAL)

CITY OF NEWARK
Delaware

CONTRACT NO. 13-13

CURTIS PAPER MILL REMEDIATION AND PARK CONSTRUCTION

NON-COLLUSION STATEMENT

Date: _____

City of Newark
Newark, Delaware

Gentlemen:

This is to certify that the undersigned
bidder _____

_____ has not, either directly or indirectly entered into
any agreement, participated in any collusion, or otherwise taken
any action in restraint of free competitive bidding in connection
with this proposal submitted to the City of Newark on the
_____ day of _____, 2013.

Signature of Bidder: _____

By: _____
Its legally authorized representative

Sworn to and subscribed before me on this _____ day of
_____ 2013.

My Commission expires _____

Notary Public

LISTING OF SUBCONTRACTORS - CONTRACT NO. 13-13

Bidder/contractors shall fill in the following listing of subcontractors they intend to use in the performance of the contract work. No subcontractor shall be substituted for any listed below without the written consent of the City. Contractor hereby certifies that he has notified all subcontractors that they are obligated to comply with the provisions of Federal or State laws as they pertain to this project and they must submit evidence of such compliance upon notice of request.

1. Name: _____

Address: _____

Type of Work: _____

2. Name: _____

Address: _____

Type of Work: _____

3. Name: _____

Address: _____

Type of Work: _____

4. Name: _____

Address: _____

Type of Work: _____

Date: _____ Bidder/Contractor: _____

By: _____
Its legally authorized representative

Check: Corporation _____; Partnership _____;
Individual _____

Street Address: _____

Mailing Address: _____

City, State, Zip: _____

ATTACHMENT 1
STATE OF DELAWARE PREVAILING
WAGE SCHEDULE



STATE OF DELAWARE
DEPARTMENT OF LABOR
DIVISION OF INDUSTRIAL AFFAIRS
225 Corporate Boulevard, Suite 104
Newark, Delaware 19702

TELEPHONE (302) 761-8200
(302) 451-3423
Fax (302) 368-6604

Via Facsimile and Regular Mail

June 3, 2013

Mr. Charles Emerson
Park Director
City of Newark
220 South Main Street
Newark, DE 19711

Re: Curtis Mill Park, New Castle County, DE

Dear Mr. Emerson:

I am responding to your request for a category determination for the Curtis Mill Park, which is a state funded construction project located in New Castle County, DE. The work consists of adding a new parking lot with entrance improvements. The work will also consist of constructing a plaza with kiosks and pathways. You estimate the total cost of construction for this project to be \$1,328,000.00.

Based on the information you provided, the Department of Labor has determined that this project is a Multiple Category project consisting of a Heavy Construction portion and a Highway Construction portion, each of which is substantial (i.e., more than twenty percent (20%) of the overall cost of the project. The Heavy Construction portion, with an estimated cost of \$438,000.00, represents approximately 46% of the construction cost, involves the demolition, earthwork, erosion and sediment control, landscaping and site amenities. The Highway Construction portion, with estimated costs of \$510,000.00, represents approximately 54% of the construction cost, includes entrance improvements and the concrete & paving.

Delaware's Prevailing Wage Regulations provide that the rates applicable to a project are the rates in effect on the date of publication of the specifications for that project. I have enclosed a certified copy of the March 15, 2013, prevailing wage rates for Heavy Construction and Highway Construction to be included in your bid specification. However, please be advised that, in the event that a contract for a project is not executed within one hundred and twenty (120) days from the earliest date the specifications were published, the rates in effect at the time of the execution of the contract shall be the applicable rates for the project.

If you have any questions or I can provide any additional assistance, please do not hesitate to contact me at (302) 451-3409.

Sincerely,

Kyle Maguire
Labor Law Enforcement Officer
Kyle.Maguire@state.de.us

Enclosure

STATE OF DELAWARE
DEPARTMENT OF LABOR
DIVISION OF INDUSTRIAL AFFAIRS
OFFICE OF LABOR LAW ENFORCEMENT
PHONE: (302) 451-3423

Mailing Address:
225 CORPORATE BOULEVARD
SUITE 104
NEWARK, DE 19702

Located at:
225 CORPORATE BOULEVARD
SUITE 104
NEWARK, DE 19702

PREVAILING WAGES FOR HEAVY CONSTRUCTION EFFECTIVE MARCH 15, 2013

CLASSIFICATION	NEW CASTLE	KENT	SUSSEX
ASBESTOS WORKERS	21.14	18.60	40.43
BOILERMAKERS	69.82	30.73	56.37
BRICKLAYERS	44.98	22.19	23.83
CARPENTERS	50.06	50.06	39.82
CEMENT FINISHERS	23.15	23.30	17.35
ELECTRICAL LINE WORKERS	34.86	26.30	25.89
ELECTRICIANS	60.60	60.60	60.60
GLAZIERS	19.54	16.96	11.48
INSULATORS	51.48	51.48	51.48
IRON WORKERS	58.70	25.54	55.78
LABORERS	38.30	38.30	38.30
MILLWRIGHTS	62.18	62.18	48.75
PAINTERS	58.07	58.07	58.07
PILEDRIVERS	67.87	37.64	29.30
PLASTERERS	18.40	15.97	10.80
PLUMBERS/PIPEFITTERS/STEAMFITTERS	72.03	21.62	17.12
POWER EQUIPMENT OPERATORS	57.06	23.65	57.06
SHEET METAL WORKERS	29.40	18.23	17.13
SPRINKLER FITTERS	31.68	11.99	9.93
TRUCK DRIVERS	28.21	19.72	19.27

CERTIFIED: 6/3/13

BY: 

ADMINISTRATOR, OFFICE OF LABOR LAW ENFORCEMENT

NOTE: THESE RATES ARE PROMULGATED AND ENFORCED PURSUANT TO THE PREVAILING WAGE REGULATIONS ADOPTED BY THE DEPARTMENT OF LABOR ON APRIL 3, 1992.

CLASSIFICATIONS OF WORKERS ARE DETERMINED BY THE DEPARTMENT OF LABOR. FOR ASSISTANCE IN CLASSIFYING WORKERS, OR FOR A COPY OF THE REGULATIONS OR CLASSIFICATIONS, PHONE (302) 451-3423.

NON-REGISTERED APPRENTICES MUST BE PAID THE MECHANIC'S RATE.

PROJECT: Curtis Mill Park-Demolition, Earthwork, Erosion and Sediment Control, Landscaping and Site Amenities, New Castle County

STATE OF DELAWARE
DEPARTMENT OF LABOR
DIVISION OF INDUSTRIAL AFFAIRS
OFFICE OF LABOR LAW ENFORCEMENT
PHONE: (302) 451-3423

Mailing Address:
225 CORPORATE BOULEVARD
SUITE 104
NEWARK, DE 19702

Located at:
225 CORPORATE BOULEVARD
SUITE 104
NEWARK, DE 19702

PREVAILING WAGES FOR HIGHWAY CONSTRUCTION EFFECTIVE MARCH 15, 2013

CLASSIFICATION	NEW CASTLE	KENT	SUSSEX
BRICKLAYERS	46.83	46.83	14.51
CARPENTERS	42.64	50.06	39.82
CEMENT FINISHERS	28.79	26.13	23.29
ELECTRICAL LINE WORKERS	22.50	43.42	21.25
ELECTRICIANS	60.60	60.60	60.60
IRON WORKERS	42.20	23.87	25.35
LABORERS	28.95	26.97	26.82
MILLWRIGHTS	16.11	15.63	13.49
PAINTERS	58.07	58.07	58.07
PILEDRIERS	66.42	23.75	26.95
POWER EQUIPMENT OPERATORS	37.00	29.47	27.16
SHEET METAL WORKERS	22.75	20.31	18.40
TRUCK DRIVERS	29.08	21.42	19.13

CERTIFIED:

6/3/13

BY:

ADMINISTRATOR, OFFICE OF LABOR LAW ENFORCEMENT

NOTE: THESE RATES ARE PROMULGATED AND ENFORCED PURSUANT TO THE PREVAILING WAGE REGULATIONS ADOPTED BY THE DEPARTMENT OF LABOR ON APRIL 3, 1992.

CLASSIFICATIONS OF WORKERS ARE DETERMINED BY THE DEPARTMENT OF LABOR. FOR ASSISTANCE IN CLASSIFYING WORKERS, OR FOR A COPY OF THE REGULATIONS OR CLASSIFICATIONS, PHONE (302) 451-3423.

NON-REGISTERED APPRENTICES MUST BE PAID THE MECHANIC'S RATE.

PROJECT: Curtis Mill Park-Entrance Improvements, Parking Lot and Pathways, New Castle County

ATTACHMENT 2
TRAFFIC STATEMENT

TRAFFIC STATEMENT

Date : July 11, 2013

DelDOT Traffic
169 Brick Store Landing Rd
Smyrna, Delaware 19977

To : Sean Golt
PS&E Project Coordinator

From :
Traffic Systems Design Engineer

Ref : **Contract Number :** **F.A.P. # :**
Project Title : CURTIS MILL PARK

- ☐ No Involvement by Traffic
- ☐ PS&E Attached, Signal Involvement
- ☐ PS&E Attached, ITMS Involvement
- ☐ PS&E Attached, Highway Lighting Involvement
- ☐ PS&E Attached, Signing Involvement

[Initials]:

cc: Melody Peters, Traffic Operations Manager
Leslie Callahan, Support Services Administrator
Earle Timpson, Assistant Director of Finance
Xxxxx Name, Project Engineer/Designer
Traffic Project File Copy

TRAFFIC PROJECT COST SUMMARY

CURTIS MILL PARK

0

DESCRIPTION	ENGINEER'S ESTIMATE
TOTAL SIGNAL ESTIMATE	\$113,441.97
TOTAL ROADWAY SIGNING ESTIMATE	\$1,695.78
TOTAL ITMS ESTIMATE	\$0.00

TOTAL ESTIMATE FOR PROJECT ---->	\$115,137.75
----------------------------------	---------------------

Traffic Statement

Project:

CURTIS MILL PARK

Date:

7/11/2013

Project #

0

				Amount			
Sign Estimate		\$1,695.78		Signal Estimate		\$113,441.97	
Signing Material		\$1,695.78		Signal Materials			
Signing Labor		\$0.00		Signal Labor			
FS-1 Received Date:							
FS-1 Amount							
Purchase orders							
Date	P.O. #	Signing Material	Material Balance	Signing Labor	Labor Balance	Signal Materials	Signal Balance
			\$1,695.78		\$0.00		\$113,441.97

DELAWARE DEPARTMENT OF TRANSPORTATION
TRAFFIC SIGNAL ESTIMATE
CURTIS MILL PARK

CONTRACT #:
F.A.P. #:
PROJECT: CURTIS MILL PARK

INTERSECTION # 1: PAPER MILL ROAD AND OLD PAPER MILL ROAD									
LINE	#	ITEM #	QTY	UOM	DESCRIPTION - (PROJECT CONTRACTOR ITEMS)	UNIT COST		TOTAL COST	
						B	A	B	A
1	113	744505	2	EA	Adjust or Repair Existing Conduit Junction Well				
2	126	744520	4	EA	Conduit Junction Well, Type 1, 20" x 20" Precast Concrete				
3	71	745522	34	LF	Supply of 3" Schedule 80 PVC Conduit				
4	73	745524	127	LF	Supply of 4" Schedule 80 PVC Conduit (Trench)				
5	95	745544	169	LF	Installation of Conduit in Unpaved Trench				
6	77	745579	8	LF	Supply of 2 1/2" Schedule 80 PVC Conduit				
7	26	746774	1277	LF	Supply and Installation of Loop Detector Wire (Wire is Incidental)				
8	65	746830	4.92	CY	Removal of Concrete Pole Bases and Cabinet Foundations				
9	181	746847	4	EA	Pole Base Type 3				
10	184	746850	1	EA	Pole Base Type 4				
11	132		4	EA	Bonding Junction Frames/ Covers				
12			1	EA	Conduit Junction Well, Type 14				
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									
TOTAL PROJECT CONTRACTOR ITEMS						→	→		

INTERSECTION # 1: PAPER MILL ROAD AND OLD PAPER MILL ROAD										UNIT COST		TOTAL COST	
LINE	#	ITEM #	QTY	UOM	DESCRIPTION - (TRAFFIC CONTRACTOR ITEMS)					B	A	B	A
1	155	746507	4	EA	Installation of Steel Pole (Equal to or Greater than 17' and less than 40')					400.00	360.00	1,600.00	1,440.00
2	4	746719	1901	LF	Supply of 4#18 Shielded Lead-In Cable					1.05	0.54	1,996.05	1,026.54
3	11	746726	1013	LF	Supply of #6 Bare Solid Copper					1.00	1.10	1,013.00	1,114.30
4	163	746733	1	EA	Removal of Steel Pole (Equal to or Greater than 17' and less than 40')					230.00	265.00	230.00	265.00
5	165	746735	1	EA	Removal of Pedestal Pole					52.00	135.00	52.00	135.00
6	197	746752	6	EA	Assembly of One-Way, 3 Face Signal Head w/ Mast Arm Bracket					45.00	80.00	270.00	480.00
7	199	746754	2	EA	Assembly of One-Way, "T" or Inverted "T" or 5 Face Signal Head w/ Mast Arm Bracket					83.00	110.00	166.00	220.00
8	200	746755	6	EA	Assembly of Pedestrian Signal Head					45.00	75.00	270.00	450.00
9	203	746758	8	EA	Installation of One-Way Signal Head Mast Arm Mount					77.00	115.00	616.00	920.00
10	205	746760	6	EA	Installation of Pedestrian Signal Head					60.00	80.00	360.00	480.00
11	206	746761	9	EA	Removal of Signal Head or Opticom from Span Wire or Mast Arm					60.00	85.00	540.00	765.00
12	207	746762	4	EA	Removal of Traffic or Pedestrian Signal Head from Pole or Pedestal					60.00	70.00	240.00	280.00
13	209	746764	4	EA	Installation or Removal of Pedestrian Button on Wood or Metal Pole					90.00	90.00	360.00	360.00
14	23	746771	1163	LF	Supply of 9/14 Traffic Control Cable (Ped Heads and Buttons)					2.00	2.10	2,326.00	2,442.30
15	210	746775	4	EA	Assembly and Installation of Emergency Preemption Receiver					90.00	105.00	360.00	420.00
16	27	746776	8	EA	Loop Detector Splice					90.00	90.00	720.00	720.00
17	32	746782	514	LF	Installation of First Cable in Existing Empty Conduit					1.80	1.33	925.20	683.62
18	33	746783	1757	LF	Installation of Each Additional Cable in Existing Empty Conduit					0.45	0.16	790.65	281.12
19	37	746787	600	LF	Removal of Cable from Conduit or Steel Pole					0.70	0.60	420.00	360.00
20	169	746810	5	EA	Installation or Removal of Traffic Signal Mast Arm					880.00	650.00	4,400.00	3,250.00
21	174	746831	1	EA	Installation of Pedestal Pole					90.00	190.00	90.00	190.00
22	222	749512	4	EA	Installation or Removal of Sign on Span Wire or Mast Arm					250.00	260.00	1,000.00	1,040.00
23	50	746897	4	EA	Installation of Sign on Pedestal Pole					60.00	55.00	240.00	220.00
24	34	746784	220	LF	Installation of First Cable in Conduit w/ Existing Wire or Cable					2.80	2.60	616.00	572.00
25	35	746785	295	LF	Installation of Each Additional Cable in Conduit w/ Existing Wire or Cable					1.00	0.40	295.00	118.00
26	134	720527	115	EA-DY	Plastic Drums					3.00	3.50	345.00	402.50
27	135	742500	200	HR	Flagger, New Castle County, State					36.40	36.40	7,280.00	7,280.00
28	147	743003	5	EA-DY	Arrowpanels, Type C					45.00	40.00	225.00	200.00
29	148	743504	55	EA	Warning Signs					12.00	150.00	660.00	8,250.00
30	154	763505	50	HR	Traffic Officers					75.00	75.00	3,750.00	3,750.00
TOTAL TRAFFIC CONTRACTOR ITEMS										→	→	32,155.90	38,115.38

INTERSECTION # 1: PAPER MILL ROAD AND OLD PAPER MILL ROAD									
DESCRIPTION - (TRAFFIC SUPPLY ITEMS)									
LINE	#	ITEM #	QTY	UOM	UNIT COST				TOTAL COST
					B	A	B	A	
1	319	999461	1	EA	2751.00	2751.00	2,751.00		2,751.00
2	320	999462	4	EA	483.90	483.90	1,935.60		1,935.60
3	323	999465	6	EA	233.00	233.00	1,398.00		1,398.00
4	330	999472	1	EA	38.00	38.00	38.00		38.00
5	331	999473	2	EA	132.00	132.00	264.00		264.00
6	333	999475	3	EA	115.00	115.00	345.00		345.00
7	346	999488	4	EA	7034.00	7034.00	28,136.00		28,136.00
8	352	999494	2	EA	4466.00	4466.00	8,932.00		8,932.00
9	353	999495	1	EA	6076.00	6076.00	6,076.00		6,076.00
10	355	999497	1	EA	6966.00	6966.00	6,966.00		6,966.00
11	373	999515	1	EA	625.00	625.00	625.00		625.00
12	394	999536	6	EA	119.00	119.00	714.00		714.00
13	397	999539	2	EA	194.00	194.00	388.00		388.00
14	420	999562	8	EA	132.00	132.00	1,056.00		1,056.00
15	428	999570	8	EA	32.50	32.50	260.00		260.00
16	429	999571	8	EA	53.10	53.10	424.80		424.80
17	430	999572	8	EA	53.80	53.80	430.40		430.40
18	432	999574	2	EA	38.29	38.29	76.58		76.58
19	433	999575	2	EA	39.15	39.15	78.30		78.30
20	381	999523	1	EA	178.00	178.00	178.00		178.00
21	382	999524	1	EA	29.00	29.00	29.00		29.00
22	385	999527	4	EA	978.00	978.00	3,912.00		3,912.00
23									
24									
25									
26									
27									
28									
29									
30									
TOTAL TRAFFIC SUPPLY ITEMS					→	→	65,013.68	→	65,013.68
TOTAL PROJECT CONTRACTOR ITEMS					→	→	→	→	→
TOTAL TRAFFIC CONTRACTOR ITEMS					→	→	32,155.90	→	38,115.38
TOTAL TRAFFIC SUPPLY ITEMS					→	→	65,013.68	→	65,013.68
CONTINGENCIES					→	→	9,716.96	→	10,312.91
TOTAL COST					→	→	106,886.54	→	113,441.97

**DELAWARE DEPARTMENT OF TRANSPORTATION
TRAFFIC ROADWAY SIGNING ESTIMATE
CURTIS MILL PARK**

CONTRACT #: 0
F.A.P. #: 0
PROJECT: CURTIS MILL PARK

PROJECT LOCATION: CURTIS MILL PARK

LINE	ITEM #	QTY	DESCRIPTION - PROJECT CONTRACTOR ITEMS	UOM
1	749687	10	INSTALLATION OR REMOVAL OF TRAFFIC SIGN ON SINGLE SIGN POST	EA
2	749688	0	INSTALLATION OF 4" DIAMETER HOLE, LESS THAN OR EQUAL TO 6" IN DEPTH	EA
3	749689	0	INSTALLATION OF 4" DIAMETER HOLE, GREATER THAN 6" IN DEPTH	EA
4	749690	4	INSTALLATION OR REMOVAL OF TRAFFIC SIGN ON MULTIPLE SIGN POSTS	SF

LINE	CODE #	QTY	SIGNING DESCRIPTION	SIZE	UNIT COST	TOTAL COST
5	X13		SALARY, OVER-TIME	EA-HR	40.00	
6	X14		SIGNFIX (FOR ANY SIGN WITH FLASHING BEACONS)	EACH	56.00	
7	X11	6	12' POSTS (W/ BASEPOST) NEEDED FOR PROJECT OR LOCATION	EACH	34.02	204.12
8	X12		6' DELINEATOR POST (W/ BOLT & ETC)	EACH	5.00	
TRAFFIC ONLY PROJECT						
9	X1		Installation of Sign Posts, 9', 10', 11', 12' in Unpaved Area or Existing Holes	EACH	26.00	
10	X2		Installation of 4" dia. Hole in Pavement or Concrete	EACH	52.00	
11	X3		Installation of 4" dia. Hole, in Excess of 6" per ea. additional inch drilled in Pavement	EACH	52.75	
12	X4		Installation of Street Name Signs	EACH	26.38	
13	X5		Installation of Signs (Two or More Mounting Holes)	S/F	2.75	
14	X6		Sets, Installation of Sign Bands and Buckles	EACH	52.75	
15	X7		Removal of Traffic Signs	EACH	26.38	
16	X8		Removal of Street Name Signs	EACH	26.38	
17	X9		Removal of Sign Posts	EACH	1.00	
18	X10		Straightening of Sign Posts	EACH	17.00	
TOTAL FOR LABOR						0.00

TOTAL FOR SIGNING MATERIALS	1,541.82
TOTAL FOR LABOR	0.00
CONTINGENCIES	154.16
TOTAL ROADSIDE SIGNING COST	\$1,695.78

PUBLIC INTEREST FINDING SUMMARY

Date : June 18, 2013

DelDOT Traffic
169 Brick Store Landing Rd
Smyrna, Delaware 19977

To : Sean Golt
PS&E Project Coordinator

From :
Traffic Systems Design Engineer

Ref : Contract Number : F.A.P. # :
Project Title : CURTIS MILL PARK

The following items will be supplied by the Delaware Department of Transportation to be installed as part of this project. Public Interest Finding (PIF) and sole source approvals are available upon request.

PUBLIC INTEREST FINDINGS

	06-450 RH Camera and Lowering Devices
	06-491 MM Adjustable Signal Heads
	07-394B AC Network Hardware
X	DOT1003-PED_SIGNAL_DIS Pedestrian Signals Push Buttons, Statewide
X	DOT1206-STEEL_POLES
	27-800-02 Fixed-Portable Traffic Data Collection Systems
	27-800-03.02 Portable Cameras
	DOT1216-CAMERAPOLES
	27-900-03 VMS Portable
X	27-900-05 LED Modules for Vehicle Traffic Signal Heads
	28-047-01 VMS Fixed (A,B,C, & D)
	29-500-75.01 WTMC Transmitter
	29-500-76.01 WTMC Antenna
X	29-500-80.02 Accessible Pedestrian Signal Systems
X	30-500-76.01 Adjustable Signal Heads
	1507 Outside Plant-Fiber Optic Installation, Statewide

SOLE SOURCE

	Signal Controller/ Cabinet
	Roadway Weather Info System (RWIS)
X	Opticom

[initials]:

cc: Mark Luszczyk, Chief Traffic Engineer
Monroe Hite, Traffic System Design Manager
Leslie Callahan, Support Services Administrator
Traffic Project File Copy

ATTACHMENT 3
PROJECT DRAWINGS